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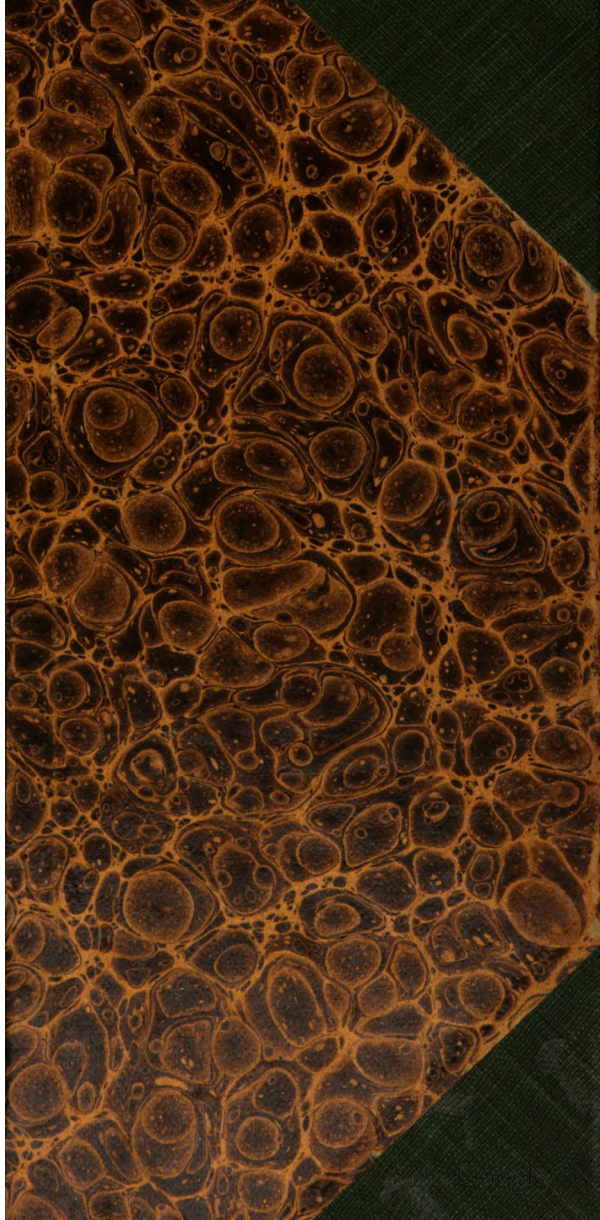
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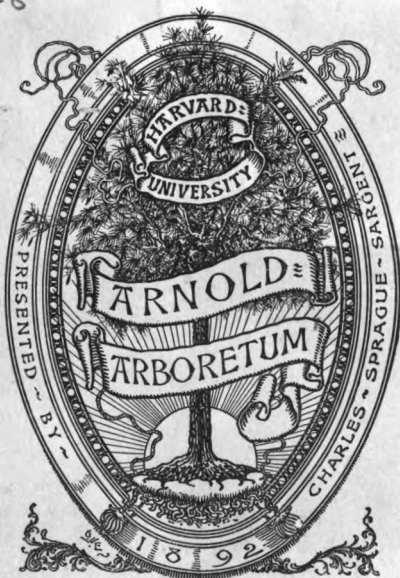
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and all objects  
ral History.  
FOOTE, M. D.  
elmont Ave.,  
elphia, Pa.

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Several extremely curious experiments have been made in Paris on the effects of santonic acid (an extract of the flowers of santolina). When a dose of about ten centigrammes is taken, a kind of intoxication is produced, which causes all objects to appear yellow to the patient, and when about fifteen centigrammes are taken the same objects appear violet-coloured.

DR. AINSLIE.

### MATERIA INDICA;

Or, some Account of those Articles which are employed by the Hindoos, and other Eastern Nations, in their Medicine, Arts, &c.

By WHITELAW AINSLIE, M.D. M.R. A.S.

In 2 Vols. 8vo. 2l. Bds.

NEW SUBSTITUTE FOR COTTON. The Paris correspondent of the New York Times writes: Great excitement prevails in those manufacturing districts of France where cotton is most used, on account of the discovery of a substitute for the now dethroned king. This substitute is the China grass or white *urtica* (nettle weed), which may be cultivated cheaply in all parts of France. The experiments with this new textile fibre have been going on for a year or more under the direction of a competent Committee appointed by the Chamber of Commerce of Rouen, and this Committee, with the weed, the raw fibre and various specimens of woven and colored and uncolored cloths in hand, have shown the Chamber, beyond all question, that the substitute is a genuine one in every point. They declare, without reservation, that none of the qualities of the cotton are wanting. I commend to your attention the lengthy report as published in two late numbers of the *Moniteur*. The Minister of the Interior is furnishing seed, obtained from China, to agriculturists, and the speculation is going to assume at once colossal proportions.

Delpino says that of the 124 flowering plants of Nova Zembla, 16 are fertilized by bees, 84 by bees and flies, and 24 by the wind. All those flowers that formerly existed there and were fertilized by the larger beetles and moths have become extinct, with the disappearance of those insects.

The agricultural report for July says that the acreage in cotton this year is a million acres in excess of last year.

INTERMITTENT FEVERS.—The Societe d'Acclimation has just received a letter from India, accompanied with a box containing a quantity of seeds of the *Casalpina Bonducella*, a plant which, according to Mr Hayes, the writer of the letter, is much used there as a specific for intermittent fevers. The Bengalee for this plant is Natha. It is a small creeper, producing a nut, the kernel of which is exceedingly bitter, and possesses the quality of Jesuits' bark in an eminent degree, with this exception, that it is aperient rather than the contrary, a valuable property in a tropical climate, where the bilious system is so generally affected. One of these seeds, reduced to a paste, with three or four pepper corns and taken three, four or five times a day with the adjunction of Oherettan tea (*Gentiana cheraiyta*) is generally found so infallible in its effect that many European physicians in India have adopted it, and will probably in a few years abandon bark entirely.

**PRODROME**  
**OF**  
**A WORK TO AID THE TEACHING**  
**OF THE**  
**VEGETABLE MATERIA MEDICA,**  
**BY THE**  
**NATURAL FAMILIES OF PLANTS,**  
**IN THE**  
**THERAPEUTIC INSTITUTE**  
**OF**  
**PHILADELPHIA.**

---

**BY THE INSTRUCTOR,**  
**WILLIAM P. C. BARTON.**

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**PRINTED FOR THE USE OF THE PUPILS**  
**OF**  
**THE INSTITUTE.**

**1833**

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## P R E F A C E .

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It is known to the numerous pupils who have attended my Lectures on Botany, Materia Medica and Toxicology, and undergone a course of examinations on those subjects, that the method pursued is different from that followed by any other teacher of Materia Medica. It is only within a short time, that they seem fully to have appreciated the usefulness and practical tendency of this method. They have, accordingly, given a most flattering attendance on the lectures, delivered in my own house, without any other patronage than that emanating from the importance of the subject itself, and their conviction of the simplicity and usefulness of the peculiar method of teaching it. A work is in preparation, which is adverted to in the title of this scrap, embracing a complete system, but the want of leisure has as yet prevented me from completing it. Until this shall be finished, the outlines now offered, may prove useful.

The beauty of the Natural System, as a study for the pupil of Medical science, desirous of obtaining clear and permanent ideas of the Materia Medica of Vegetables, is its foundation in Nature, or natural structure and configuration—its ease, by reason of the family resemblance of the individuals of any family—and its simplicity, compared to the complex classification generally pursued.

The impressions on the mind of the student, of the power and effects of medicines, are strong and continued; because

the association of one medicine of a family, brings fully to the memory a quick thought on the properties of every member of the same family. If, as in some families, different, and even diverse proximate medicinal principles, are found to pervade the different genera of the family, still there are many points in which they will all be found to agree; and this unity, in some leading characteristic effect, exists almost without exception. The ample means and opportunities of studying the subjects of this prodrome, presented in the cabinet lecture room of this Institute, will enable the student of one course quickly to make himself acquainted with its leading details, and the perpetual pupils will be able to master it thoroughly.

# NATURAL SYSTEM

## OF

# VEGETABLES.

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**THERE** are two great divisions.

1. **Vasculares**, or vascular plants, comprising all plants which have spiral vessels both in the stems and leaves, *stomatia*\* in the cuticle, distinct flowers, and sexual organs for reproduction of the species. These are the *phœnogamous* plants, or those having visible parts for consecutive perpetuation. The *vasculares* are the flowering plants.

2. **Cellulares**, or cellular plants, comprising all vegetable products destitute of spiral vessels and cellular organs. These are *Cryptogamous* plants, or those which have occult organs (if any) for perpetuating their kind, invisible to us even by lenses of great power. The *cellulares* are the flowerless plants.

With very few exceptions, all the plants embraced by the different systems of *Materia Medica* of Europe and the United States, are to be found in the first division, or *Vasculares*. It is again subdivided into two sections.

### SECTION I.

*Exogenæ*, or *Dicotyledonous* plants, or such as have distinct pith, wood, and bark, in the stem and its ramifications—leaves made up of reticulations, or of mesh-like structure—and having an embryo with two or more opposite seed lobes, which being called cotyledons, and the generality of this section of *Vasculares* having only two of these cotyledons, the whole section is characterized by this number, and called *Dicotyledonous* plants. All plants of this section grow by new layers annually deposited on the *exterior* surface.

\* *Stomatia*.—These are organised pores, for a purpose unknown to us; conjectured by some, for the purpose of breathing, like the spiracula of insects.

## SECTION II.—(Of Vasculares.)

*Endogenæ*, or Monocotyledonous plants. These are such as have *no distinction* of pith, wood, and bark, in the stem, with leaves showing parallel veins, fruit having an embryo with one cotyledon only; or, if there should be two seed lobes, they are alternate, *not opposite* as in the first section. The plants of this section grow larger by the increase of the stem by *internal* additions to it, and not by enlarging on the exterior surface as in the first section.

As the Vasculares have just been said to contain, with few exceptions, all the medicinal plants of Europe and the United States, so now it may be remarked that the first section of Vasculares, embraces about seven-eighths of the plants of the Pharmacopœas, the remaining octant, belonging to the second section. This will be seen by looking over the products contributed by the different natural families which follow.

The exceptions noticed of medicinal plants of Europe and the United States, which are not embraced by the first great class, Vasculares, are to be found consequently in the second, or Cellulares, and are the ferns, mosses, lichens, fuci, fungi, and algæ, which will be noticed under the natural families of Cellulares. It is well to recollect, however, that Iodine is yielded by the families of Cellulares; and the knowledge of the parasitic lichens on the Peruvian barks, on the Cusparia bark, the false Angostura bark, and other cortices, is the surest mean of identifying the several best species and varieties, and of discriminating the poisonous Brucea anti-dysenterica, or false Angostura, from the Bonplandia trifoliata, or true Angostura or Cusparia bark. Other advantages will be derived from an attention to the families of the Cellulares, to the physician. His knowledge of them enables him to ascertain at first, sight the poisonous mushroom, and point out the edible ones. For this reason after the families of the second section of Vasculares are noticed in the Lectures according to this prodrome, then the families of the Cellulares will be discussed, and the toxicological genera of fungi pointed out, together with an exhibition, by diagrams and drawings, of the structure and colours severally characteristic of poisonous and innocent and esculent fungi fuci and algæ.

## NATURAL FAMILIES YIELDING MEDICINES.

## FIRST GREAT DIVISION OF VASCULARES.

## SECTION A.—DICOTYLEDONOUS PLANTS.

Anacardiaceæ	Guttiferæ	Ranunculaceæ
Amentaceæ	Gentianæ	Rosaceæ
Apocynæ	Geraniaceæ	Rhamnæ
Asclepiadæ	Juglandæ	Rutaceæ
Aristolochiæ	Lobeliaceæ	Scrophularinæ
Amygdalæ	Laurinæ	Solanæ
Artocarpeæ	Leguminosæ	Stellatæ
Aurantiaceæ	Linæ	Spigeliaceæ
Amyrideæ	Labiatæ	Saxifragæ
Bignoniaceæ	Magnoliaceæ	Styraceæ
Borraginæ	Meliaceæ	Simarubaceæ
Berberidæ	Myrtaceæ	Salicarizæ
Calycanthæ	Malvaceæ	Salicinæ
Chenopodæ	Myristicæ	Ternstro miaceæ
Caryophyllæ,	Monimiæ	Thymelæ
Coniferæ	Menispermæ	Umbelliferæ
Cruciferæ	Nelumbonæ	Urticæ
Cucurbitaceæ	Oleaceæ	Ulmaceæ
Cinchonaceæ	Oxalidæ	Valerianæ
Cupuliferæ	Podophyllæ	Vaccinæ
Compositæ	Phytolaccæ	Violaceæ
Convolvulaceæ	Papaveraceæ	Vites
Caprifoliaceæ	Pomaceæ	Winteræ
Dipterocarpeæ	Polygalæ	Zygophyllæ
Diosmæ	Polygonæ	
Euphorbiaceæ	Piperaceæ	
Ericæ	Pyrolaceæ	

## SECOND GREAT DIVISION OF VASCULARES.

## SECTION B.—MONOCOTYLEDONOUS PLANTS.

Asphodeleæ,	Colchiaceæ,	Iridæ,
Aroidæ,	Graminæ,	Ilicinæ.

Melanthaceæ,	Palmæ,	Smilacæ,
Scitamineæ,	Marantacæ,	Orchideæ.

## SECOND GREAT DIVISION.—CELLUARES.

Sec. A. Fillicoides.—Fern-like Plants.

Sec. B. Muscoides.—Moss-like Plants.

Sec. C.—Aphyllæ. Leafless Plants; families Musci Hepatic, and Characæ.

PROXIMATE VEGETABLE PRINCIPLES AND ALKALOIDS  
YIELDED BY THE NATURAL FAMILIES DESCRIBED IN  
THE LECTURES OF THIS SCHOOL :

1. AMANATINE, from Fungi.
- 1.\* ACONITA, from natural family Ranunculacæ.
2. ASPARAGIN, from Apodeleæ.
- 2.\* ATROPIA, from Solanæ.
3. BRUCIA, from Xanthoxyleæ, as in *Brucca ferruginia*, and from Strychnæ, as in *Strychnos Nux Vomica*, which contains also *Strychnia*.
4. COLOCINTHIN, from Cucurbitacæ.
- 4.\* BASSORINE, from Umbelliferæ; as in *Sagapenum* and *Assafetida*, and it is also in Gum *Bdellium*, (the product probably, of an Umbelliferous plant—for this Gum Resin see my “*Outlines*” vol. 2d., p. 77.,) from Euphorbiacæ, as in *Euphorbium*.
5. CAFFEIN, from cinchonacæ, as in *Coffea arabica*.
- 5.\* CYTISSINA, from Ranunculacæ, as in *Aconitum Napellus*, and *Aconitum Ferox*; from Leguminosæ, as in *Cytissus Laburnum*, from which it is named; from *Aristolochiæ*, as in *Asarum Europeum*, or *Asarabacca*, and, probably, in our Wild Ginger, or *Asarum Canadense*.
6. CATHARTINE, from Leguminosæ; see my “*Notes*,” vol. 2d., p. 268.
7. CERINE—a component of wax.
8. CERASIN, 3 varieties.
  - a. *Astragalus tragacantha*, from Leguminosæ.
  - b. *Pruni Cerasi gummi*, from Amygdalæ.
  - c. Gummi Bassoræ conjectured from a species of mesembryanthemum, by M. Virey, (*Journal Pharmacie*.)
9. CINCHONIA, from Cinchonacæ, as in the Peruvian

9\*. CHINIOIDIA, obtained from Peruvian barks, by Dr. Serturner.

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35. **STRYCHNIA**, from Apocynææ.

**SUBERIN**, from Cupuliferæ, as cork-tree.

36. **TANNIN**, from Cupuliferæ, and nearly all the families yielding artringency.

37. **TIGLIN**, from Euphorbiacææ.

38. **ULMIN**, from Ulmaceæ.

39. **VERATRIA**, from Colchiacææ, as in *Colchicum autumnale*; and Melanthacææ, as in *Veratrum album*, *Veratrum viride*, *Veratrum sabadilla*.

### NATURAL FAMILIES YIELDING EXCITANTS.

Umbelliferæ, }  
Myrtacææ, } by the uncombined volatile oil they contain.  
Aurantiacææ, }  
Rubiaceæ, }  
Labiataæ, }

Aristolohiææ, } roots, }  
Aroidææ, } wood, }  
Scitamineææ, } barks, } by the combined volatile oil they  
Laurineææ, } contain in the several parts de-  
Winteræææ, } flowers, } signated.  
Meliacæææ, }  
Myrtacæææ, }  
Iridææææ, } fruit, }  
Myrtacæææ, } seeds, }  
Piperacæææ, }  
Laurineæææ, }  
Scitamineæææ, }  
Myristicæææ, }

Laurineæææ, } by the camphor they contain.  
Dipterocarpeæææ, }

Piperacææææ, }  
Cruciferææææ, } by the acrid oil they contain.  
Compositææææ, }

Monimieæææ, by the bitter extractive of the roots.

Apocynææææ, by the *Strychnia* yielded by the roots and fruit.

Zygophylleæææ, by the *guaiacine* they contain.

Fuci, by the Iodine and its preparations obtained from the whole tribe.

Fungi, by the amanatine they contain.

### NATURAL FAMILIES YIELDING DIRECT SEDATIVES.

Laurineææææ, } and all which by distillation, yield hydrocyanic  
Pruniææææææ, } acid—laurel water.

**Amygdaleæ**, by the volatile oil of the kernels of the drupe or stone fruit.

**Solaneeæ**, by the empyreumatic volatile oil of the smoke of the leaves, and by the nicotina contained in the same.

### NATURAL FAMILIES YIELDING TONIC ASTRINGENTS.

**Polygaleæ**, }  
**Polygoneeæ**, } by the tannin, combined with gallic acid in the  
**Rosaceæ**, } roots.

**Salicariæ**, }  
**Fungi**, } by the tannin combined with gallic acid in the  
plants.

**Cupuliferæ**, by the tannin combined with gallic acid in the barks.

**Ericineæ**, tannin, combined with gallic acid, in the leaves.

**Rosaceæ**, tannin, combined with gallic acid, in the flowers.

**Amygdaleæ**, }  
**Myrtaceæ**, } by the tannin, combined with gallic acid,  
in the fruit.

**Leguminosæ**, }  
**Myrtaceæ**, } by the tannin, combined with gallic acid,  
in the proper juice.

**Cupuliferæ**, by the tannin, combined with gallic acid, in the morbid excrescences.

**Leguminosæ**, by the Hematine in the wood.

### NATURAL FAMILIES YIELDING DIRECT ANTISPASMODICS.

**Valerianeeæ**, by the fetid volatile oil of the roots.

**Umbelliferæ**, by the gum-resin of the Genera producing the well known drugs of this tribe.

### NATURAL FAMILIES YIELDING ANTILITHICS.

**Gentianeæ**, **Diosmeæ**, and all those which contain the bitter principle in considerable quantity.

### NATURAL FAMILIES YIELDING THE CATHARTIC PRINCIPLE.

#### FIRST SECTION.

*That Principle operating Laxatively.*

**Oleaceæ**, by the saccharine matter in the proper juice of one genus and the fixed oil in another.

**Leguminosæ**, by the saccharine pulp of the Legumes in

some, the acidulous fruits of other genera—and the fixed oil of one genus.

Amygdalææ, by the acidulous fruits.

Linææ, by the fixed oil of the seeds.

## SECOND SECTION.

### THE CATHARTIC PRINCIPLE

#### *Operating Purgatively.*

Euphorbiacææ, by the fixed oil of the seeds.

Amyridææ,  
Leguminosææ, } by the oleo-resin they abound in.  
Coniferææ,  
Anacardiæææ,

Convolvulacææ, } by the resin the roots abound in, perhaps  
Polygonæææ, } by the *Jalapine*.

Asphodeleææ, by the resin-extractive of the proper juice.

Leguminosææ, by the *Cathartine* abounding in their leaves.

## THIRD SECTION.

### THE CATHARTIC PRINCIPLE

#### *Operating Drastically.*

Cucurbitacæææ,  
Convolvulacæææ, } by the gum-resin contained in the fruit  
Guttiferæææ, } (Pepo, or cucurbatus,) of some genera ;  
Rhamnææææ, } in the proper juice of other genera—and  
Labiataæææ, } by the *elatina* in one genus.

Ranunculacæææ, by the oleo-resin of the root.

Euphorbiacæææ, by the acrid fixed oil of the seeds of all the genera—and by the proper juice of the herb of one genus.

Solanæææ, by the nicotina abounding in the leaves.

Melanthacæææ, by the veratria in the roots of two genera.

## NATURAL FAMILIES YIELDING DEMULCENTS.

Leguminosæææ, by the different gums.

Aurantiacæææ, by the gum of *Feronia Elephantum* ?

Malvacæææ, roots of *Malva* tribe, leaves of *Gmelina parviflora* ?—by the mucus they contain.

Linæææææ, }  
Rosacæææææ, } by the mucus of the pods.

Leguminosææææ, } by the cerasin they yield in some, and the  
Myrtacæææææ, } sarcocoll in other genera.

Amygdalæææææ, }  
Oleracæææææ, } by the fixed oil they yield—the last giving  
Palmæææææææ, } *Cocos butyracea*.

*Sesamum, orientale* by the fixed oil and mesilage of seeds and leaves.

*Marantaceæ*, the roots, }  
*Lichenes*, the plants, }  
*Orchideæ*, the bulbs, } by the fecula they yield.  
*Palmeæ*, the pith, }  
*Gramineæ*, the seeds, }

### NATURAL FAMILIES YIELDING DILUENTS.

*Gramineæ*, giving barley-water, rice-water, &c. &c.

### NATURAL FAMILIES YIELDING DIAPHORETICS.

*Cinchonaceæ*, by the Emetina they yield.

*Thymeleæ*, by the Daphnia they yield.

*Compositæ*, by the Cytissina one genus yields, (*Arnica*.)

*Papaveraceæ*, by the Morphia in opium, and its acetate, sulphate, and muriate.

*Zygophylleæ*, by the proper juice abounding in the medicinal genera.

*Aristolochiæ*, }  
*Monimiæ*, } the roots, }  
*Asclepiadæ*, } by the volatile oils contained in  
*Labiataæ*, the herbs, } the parts designated.  
*Laurineæ*, the wood, }  
*Ericææ*, the leaves, }

*Solanææ*, by the Solania in the plant yielding it.

*Laurineæ*, } by the Camphoraceous principle with  
*Dipterocarpeæ*, } which they abound, viz. Camphor.

### NATURAL FAMILIES YIELDING DIURETICS.

#### SECTION FIRST.

#### DIRECT IN THEIR OPERATION.

*Coniferaæ*, } by the uncombined volatile oil obtained by dis-  
*Myrtaceæ*, } tillation from the leaves of all the medicinal  
 genera, and the berries of one genus.

*Fuci*, }  
*Algæ*, } by the Iodine they yield on icineration.

Numerous inland families, by the Potassa they yield on icineration.

Numerous families of sea-side plants, by the soda they produce on icineration.

*Diosmeæ*, by the oleo-resin obtained from the leaves.

**Leguminosæ**, by the oleo-resin obtained from the balsam yielded by one genus.

**Piperacæ**, }  
**Coniferæ**, } by the oleo-resin yielded by the berries.

**Melanthacæ**, }  
**Colchiacæ**, } by the Veratria, obtained from the roots.

**Asphodeleæ**, by the scillitina obtained from the bulbs.

**Smilacæ**, }  
**Polygalæ**, } the roots, }  
**Pyrolacæ**, } the leaves, } by unascertained principles they  
**Ericæ**, } contain severally in the parts  
**Leguminosæ**, the twigs, } designated.

#### SECTION SECOND.

### INDIRECT IN THEIR OPERATION.

**Solanæ**, by the Nicotina of the leaves.

**Scrophularinæ**, by the Digitalia of the leaves.

**Compositæ**, by the Lactucarium, in the proper juice of two genera, and not as is generally supposed in one genus only.

**Gentianæ**, by the Gentiana, of the different genera.

### NATURAL FAMILIES YIELDING EMETICS.

**Cruciferæ**, by the acrid volatile oil in the seeds, and farina made from them.

**Compositæ**, by the acrid volatile oil in the infusion of the flowers, leaving the tonic principle insoluble (in water) behind.

**Aristolochiæ**, by the proximate principle cytissina, yielded by the leaves.

**Cinchonacæ**, by the promimate principle emetina, yielded by the roots.

**Asphodeleæ**, by the proximate principle Scillitin in the bulbs.

**Solanæ**, by the proximate principle Nicotina in the leaves.

### NATURAL FAMILIES YIELDING ERRHINES.

**Iridæ**, the roots.

**Labiata**, }  
**Aristolochiæ**, } the herbs, the leaves, and the flowers in  
different genera. The errhine principle  
in all of the above is combined with a  
volatile oil.

**Euphorbiacæ**, }  
**Solanæ**, } the acrid resin of the proper juice contains  
the errhine principle in these 2 families.

**Colchiacæ**, }  
**Melanthacæ**, } the errhine principle is obtained from the  
roots of these in the form of Veratria.

## NATURAL FAMILIES YIELDING EMMENAGOGUES.

- Polygalææ, } the roots, } by the oleo-resin contained in the  
 Rutacææ, } the herb, } parts designated.  
 Coniferææ, }  
 Rubiaceææ, by the bitter principle contained in the roots.  
 Labiataæ, } by the bitter principle in the proper juice.  
 Asphodeleææ, }  
 Ranunculacææ, by the gum-resin in the roots of some and  
 the proper juice of other genera.  
 Valerianææ, } the roots, } by the volatile oil contained in  
 Aristolochiææ, } the herb, } the parts designated.  
 Compositææ, }  
 Umbelliferææ, by the gum-resins yielded by the several ge-  
 nera.  
 Scrophularinææ, by the Digitalia yielded by the leaves.  
 Graminææ, by an unknown principle in *secale cornutum*.

## NATURAL FAMILIES YIELDING EPISPASTICS;

*Operating in limited quantities, or by dilution, as Rubifacients.*

- Asphodeleææ, }  
 Solanæææ, } by the acrid oil the plant contains.  
 Cruciferææ, }  
 Myrtacæææ, } by the volatile oil they contain.  
 Coniferæææ, }  
 Ranunculacææ, by the acrid oil contained in the roots.  
 Cruciferææ, by the acrid oil contained in the bulbs.  
 Thymeleææ, by the acrid oil contained in the barks.  
 Coniferæææ, } by the oleo-resins they yield as Pix B. Gal-  
 Umbelliferææ, } banum; Ammoniacum.  
 Compositææ, by the acrid oil in the roots of pellitory and the  
 tomentum of the leaves as in Chinese moxa.

## NATURAL FAMILIES YIELDING ESCHAROTICS.

All the families which yield on incineration potash and soda.

## NATURAL FAMILIES WHICH YIELD ERODENTS.

- Graminæææ, } by the refined sugar obtained from sugar  
 and } cane and sugar maple.  
 Acerinæææ, }

## NATURAL FAMILIES YIELDING EXPECTORANTS.

**Styracæ**, in the Benzoic acid.

**Solanæ**, the leaves chewed, or the smoke inhaled in one genus—the herb and root in another, either by internal exhibition or inhalation of the smoke.

**Coniferæ**, by the burning of the terebinthinate secretion, and probably the only true expectorants.

The families yielding Emetina, or Scillitina, as **Cinchonacæ**, **Asphodelæ**.

The family yielding the four or five fetid gums, **Umbellifæræ**.

The family producing myrrh, which is either **Amyris**, **Leguminacæ**, or as some think **Laurinæ**. All doubtful.

The families producing the balsams, as **Leguminosæ**, **Styracæ**.

Those producing the oleo-resins, as **Amyridæ**, **Leguminosæ**.

Those yielding the bitter extractive, as **Labiata**, **Compositæ**, **Lichenes**.

## NATURAL FAMILIES YIELDING DIRECT NARCOTICS.

**Papaveracæ**, as in **Morphia**, with meconic acid in opium and the extract of poppies—its sulphate, muriate, acetate, and citrate.

**Solanæ**, as in **Atropia**, **Datura**, and **Hyoscyamia**.

**Ranunculacæ**, as in **Aconita**.

**Umbellifæræ**, as in **Conia**.

**Scrophularinæ**, as in **Digitalia**.

**Urticæ**, as in **Lupulia**.

**Laurinæ**,  
**Dipterocarpeæ**, } as in Camphor.

**Erinacæ**, as in the unknown poisonous principle of **Rhododendron chrysanthum**, **R. maximum**, &c.

**Compositæ**, as in **Lactucarium**.

**Auacardiaceæ**, as in the poisonous principle of the genus **Rhus**.

**INDIRECT NARCOTICS**—spirituous or vinous preparations of the above.

Colchiaceæ, }  
 Melanthaceæ, } as in Veratrina.

**NATURAL FAMILIES YIELDING REFRIGERANTS.**

Aurantiaceæ, as in the citric acid of the juicy parts of them.

Polygonææ, }  
 Oxalidææ, } as in oxalic acid.

Leguminosææ, as in tartaric acid, contained in the fruit of several genera.

Pomacææ, }  
 Amygdalææ, } as in malic acid, contained in the fleshy fruits  
 Myrtacææ, } of these.

Menispermææ, as in the malic acid of *cocculus indicus*.  
 (Boullay, Jour. de Pharm., 1828, p. 63.)

Succulentææ, as in the malic acid with lime of *sempervivum tectorum* and several species of *sedum*.

Vites, as in malic acid in grapes.

*Different Families yielding on incineration, soda and potash.*

The sap of all plants yielding acetic acid, free or combined.

**NATURAL FAMILIES YIELDING SIALAGOGUES.**

Cruciferææ, } the S. principle is contained in the volatile oil  
 Aroideææ, } of the roots, leaves and seeds.

Compositææ, } the S. principle is contained in the fixed acrid  
 Solanæææ, } oil of the roots and leaves.

Scitamineææ, } the S. principle is contained in the acrid resin  
 Thymelæææ, } of the roots and bark.

**NATURAL FAMILIES YIELDING TONICS.**

Cinchonacææ, as in *Cinchonia*, combined with kinic acid in Peruvian barks.

Rutacæææ, as in *Cinchonia*, combined with igasuric acid in *Bonplandia trifoliata*, *cusparia febrifuga*—also in *Cinchonia*, combined with sulphuric acid in the sulphate.

Cinchonacææ, as in *Quinia*, combined with kinic acid in some Peruvian barks and its union in the sulphate, (when chemically separated) with sulphuric acid.

Piperacæææ, as in *Piperina* combined with an acrid oil in the pepper tribe.

Compositæ, as in Piperina, also combined, in the flowers of chamomile, with an acrid oil.

Gentianæ, as in Gentiana, from gentian tribe, and Quassina, from chironia and sabbatia.

Salicinæ, }  
Amentacæ, } as in Salicina.

Simarubacæ, as in Quassina.

Sarmentacæ, as in the bitter extractive of the roots of cocculus palmatum, or menispermum calumba (Columbo.)

Rosacæ, as in the bitter extractive of the roots of geum urbanum or avens.

Lichenes, as in the bitter extractive of the whole plant cetraria islandica.

Gentianæ, } as in the bitter extractive of the leaves of the  
(again.) } Menyanthes trifoliata, or Buck-bean.

Ericæ, as in the bitter extractive of the leaves of Arbutus uva ursi.

Compositæ, as in the bitter extractive of the flowers of cnicus benedictus.

Euphorbiacæ, as in the aromatic volatile oil of the bark of croton carcarilla, c. Eleutheria.

Aroidæ, as in the volatile oil of the roots of acorus calamus—also the family yielding myrrh, whatever it may be.

## MEDICINAL PLANTS

### CELLUARES.

#### FUNGI.

Tuber cibarium  
Agaricus Prunulus  
Boletus purgans  
Boletus ignarius  
Amanita aurantiaca

#### LICHENES.

Lecanora Parella  
Usnea plicata  
Sticta pulmonacea  
Boletus edulis  
Boletus fomentarius  
Cetraria islandica

#### ALGAE.

Fucus Helminthochortos  
Fucus vesciculosus  
Fucus natans

#### FILICES.

Aspidium coriaceum  
Polypodium vulgare  
Aspidium filix foemina  
Asplenium Rutamurarium  
Asplenium Adiantum nigr  
Pteris aquilina  
Adiantum Capillus Veneris  
Dracaena Draco

*Aspidium filix mas.*  
*Scolopendrium officinale*  
*Asplenium Trichomanes*

## OSMUNDACEAE.

*Osmunda regalis*

## AROIDAE.

*Acorus Calamus*  
*Arum maculatum*

## PIPERACEAE.

*Piper nigrum*  
*Piper longum*  
*Piper Cubeba*

## GRAMINEAE.

*Saccharum officinarum*  
*Panicum italicum*  
*Andropogon Schoenanthus*  
*Andropogon Nardus*  
*Sorghum vulgare*  
*Avena nuda*  
*Arundo Donax*  
*Secale Secale*  
*Triticum sativum*  
*Triticum Spelta*  
*Triticum repens*  
*Lolium temulentum*  
*Hordeum vulgare nudum*  
*Hordeum zeocriton*  
*Oxyra sativa*  
*Panicum miliaceum*  
*Zea mays*

## MELANTHACEAE.

*Veratrum Sabadilla*  
*Veratrum album*  
*Colchicum autumnale*

## PALMAE.

*Calamus Draco*  
*Cocos nucifera*  
*Elaeis guineensis*  
*Sagus vinifera*  
*Ceroxylon andicola*  
*Phoenix dactylifera*

## SMILACEAE.

*Asparagus officinalis*  
*Convallaria Polygonatum*  
*Convallaria Majalis*  
*Paris quadrifolia*  
*Smilax Sarsaparilla*  
*Smilax aspera*  
*Smilax China*

## ASPHODELEAE.

*Allium sativum*  
*Allium Porrum*  
*Allicum Ascalonicum*  
*Scilla maritima*  
*Lilium candidum*  
*Aloe vulgaris*  
*Aloe succotrina*

## SCITAMENAE.

*Canna indica*  
*Alpinia Galanga*  
*Curcuma longa*  
*Amomum Zerumbet*  
*Menyanthes trifoliata*  
*Amomum Cardamomum*  
*Amomum Zingiber*  
*Amomum Zedoaria*  
*Amomum augustifolium*  
*Amomum Grana paradisi*  
*Curcuma rotunda*  
*Kemphaeria rotunda*

## ORCHIDEAE.

*Vanilla aromatica*  
*Orchis mascula*  
*Orchis maculata*  
*Orchis morio*

## IRIDEAE.

*Iris florentina*  
*Crocus sativus*

## ARISTOLOCHIAE.

*Asarum europaeum*  
*Aristolochia longa*  
*Aristolochia rotunda*  
*Aristolochia clematidis*

**Aristolochia Serpentaria****JUGLANDEAE.****Juglans cinerea****Juglans regia****CUPULIFEREAE.****Quercus Robur****Quercus Suber****Quercus pedunculata****Quercus coccifera****Corylus Avellana****Castanea vesca****Fagus sylvatica****CONIFERAE.****Pinus sylvestris****Pinus Pinea****Pinus Pinaster****Abies Larix****Abies excelsa****Abies vulgaris****Abies balsamifera****Taxus baccata****Juniperis Sabina****Cupressus Canadensis****Juniperus communis****Juniperus Lycia****SALICINEAE.****Salix alba****Betula alba****Polypus nigra****Liquidambar Styraciflua****PHYTOLACCEAE.****Phytolacca decandra****CHENOPODEAE.****Salicornia herbacea****Salsola soda****Salsola kali****Salsola Tragus****Salsola sativa****Chenopodium ambrosioides****Chenopodium anthelmintic.****Camphorosma monspeliaca****Beta vulgaris****Spinacia oleracea****POLYGONEAE.****Rumex Acetosa****Rumex scutatus****Rheum Rhaponticum****Rheum Palmatum****Polygonum hidropiper****Polygonum Fagopyrum****Erythraea centaurium****Rumex Acetosella****Polygonum bistorta****Polygonum aviculare****Rheum undulatum****LAURINEAE.****Laurus nobilis****Laurus Culilawan****Laurus Malabattrum****Periploca graeca****Persea Cassia****Persea Sassafras****Persea gratissima****Persea Cinnamomum****Persea Camphora****Persea Pichurium****Evodia aromatica****CONVOLVULACEAE.****Convolvulus arvensis****Convolvulus Scammonia****Cuscuta europaea****Convolvulus Turpethum****Convolvulus sepium****Convolvulus Soldanella****Convolvulus Jalapa****Convolvulus Scoparius****Convolvulus Mechoacanna****MYRISTICAE.****Myristica moscata****MAGNOLIACEAE.****Magnoli tripetala****M. Aculata**

**M. Glauca****THYMELEAE.****Daphne Mezereum****Daphne Cneorum****Daphne Laureola****Daphne Gnidium****SALICINEAE.****Santalum album****ULMACEAE.****Ulmus campestris****U. fulva****URTICEAE.****Artocarpus incisa****Ficus Carica****Dorstenia Contrajerva****Anchusa tinctoria****Urtica dioica****Cannabis sativa****Urtica urens****Humulus Lupulus****EUPHORBIAE.****Euphorbia Antiquorum****Euphorbia Lathyris****Euphorbia Canariensis****Euphorbia ipecacuanha****Euphorbia Helioscopia****Euphorbia officinarum****Croton Lacciferum****Croton Tiglium****Crozophora tinctoria****Jatropha Manioto****Buxus sempervirens****Ricinus communis****Phyllanthus emblica****Hippomane Mancinella****Jatropha Curcas****Mercurialis annua****PLUMBAGINEAE.****Plumbago europaea****Statice Limonium****PLANTAGINEAE.****Plantago marjor****Plantago Psyllium****SOLANEAE.****Atropa Belladonna****Physalis Alkekengi****Solanum Lycopersicum****Solanum tuberosum****Solanum Dulcamara****Solanum nigrum****Capsicum annuum****BORRAGINEAE.****Anchusa officinalis****Pulmonaria officinalis****Borago officinalis****Parietaria officinalis****Lithospermum officinale****Cynoglossum officinale****Simphytum officinale****BIGNONIAE.****Bignonia Catalpa****GENTIANEAE.****Gentiana lutea****Gentiana****Gentiana ochtroleuca****Gentiana saponaria****Gentiana crinita****Gentiana Catesbix****ASCLEPIADEAE.****Cynanchum Monspeliacum****Cynanchum Vincetoxicum****Cynanchum Argemone****Cynanchum Ipecacuanha****Strychnos Nux vomica****Strychnos Ignatia****Strychnos Colubrina****Strychnos Tieute****Evodia aromatica****Stillingia sebifera****Siphonia elastica****Costus arabicus**

## OLEACEAE.

*Fraxinus excelsior*  
*Fraxinus ornus*  
*Olea Europea*

## JASMINEAE.

*Phyllirea latifolia*  
*Ligustrum vulgare*  
*Jasminum officinale*  
*Jasminum grandiflorum*  
*Orchis fusca*

## STYRACEAE.

*Styrax officinale*  
*Styrax Benzoin*  
*Morus nigra*

## ERICAEAE.

*Chrysanthuin*  
*Rhododendron*  
*Arbutus unedo*  
*Matinum*  
*Arbutus Uva ursi*  
*Serapias lingua*

## PYROLACEAE.

*Pyrola rotundfolia*  
*P. Chryantha*  
*Chimaphila umbellata*  
*Chimaphila maculata*

## LOBELIACEAE.

*Lobelias*

## COMPOSITAE.

*Lactuca sativa*  
*Lactuca scariola*  
*Lactuca virosa*  
*Sonchus oleraceus*  
*Taraxacum dens Leonis*  
*Scorzonera humilis*  
*Scorzonera hispanica*  
*Tragopogon porrifolium*  
*Cichorium Intybus*  
*Cichorium Endivia*  
*Carthamus tictorius*  
*Carlina acaulis*  
*Arctium majus*  
*Cynara Scolimus*

*Cynara Cardunculus*  
*Centaurea centaurium*  
*Carduus Marianus*  
*Serratula tinctoria*  
*Eupatorium cannabinum*  
*Eupatorium Ayapana*  
*Balsamita suaveolens*  
*Santolina chamaecyparissus*  
*Spilanthus oleraceus*  
*Spilanthus Acmella*  
*Tanacetum vulgare*  
*Artemisia Abrotanum*  
*Artemisia campestris*  
*Artemisia judaica*  
*Artemisia contra*  
*Artemisia Santonica*  
*Artemisia pontica*  
*Artemisia Absinthium*  
*Artemisia caerulea*  
*Artemisia Dracunculus*  
*Conyza squarrosa*  
*Gnaphalium Stoeas*  
*Chrisantemum Parthenium*  
*Matricaria Chamomilla*  
*Bellis perennis*  
*Inula Helenium*  
*Inula dysenterica*  
*Tussilago Farfara*  
*Arnica montana*  
*Anthemis Pyretrum*  
*Anthemis nobilis*  
*Achillaea Millefolium*  
*Achillaea Ptarmica*  
*Achillaea Ageratum*  
*Helianthus tuberosus*  
*Calendula officinalis*  
*Milleria Contrayerba*

## VALERIANA.

*Valeriana officinalis*  
*Valeriana celtica*

## STELLATAE.

*Rubia tinctorum*  
*Gallium verum*

*Gallium verum*  
*Rubia tinctorium*  
*Asperula odorata*  
*Valantia cruciata*

## CINCHONACEAE.

*Psycotria emetica*  
*Cephaelis Ipecacuanha*  
*Coffaea Aarabica*  
*Cinchona Condaminea*  
*Cinchona ovalifolia*  
*Cinchona magnifolia*  
*Cinchona cordifolia*  
*Cinchona lanceolata*  
*Cinchona glandulifera*  
*Nauclea Gambir*

## CAPRIFOLIACEAE.

*Sambucus nigra*  
*Sambucus Eubulus*  
*Sambucus canadensis*

## ARALIACEAE.

*Panax quinquefolium*  
*Aralia nudicaulis*

## UMBELLIFEREAE.

*Eryngium campestre*  
*Sanicula europaea*  
*Sison Ammi*  
*Sison Anisum*  
*Carum Carvi*  
*Oenanthe crocata*  
*Oenanthe phellandrium*  
*Apium graveolens*  
*Apium Petroselinum*  
*Meum foeniculum*  
*Meum Athamanticum*  
*Cachris maritima*  
*Coriandrum sativum*  
*Cicuta virosa*  
*Aethusa cynapium*  
*Daucus Carota*  
*Chaerophyllum sativum*  
*Ammi majus*  
*Cuminum cyminum*

## C

*Conium maculatum*  
*Selinum Galbanum*  
*Peucedanum officinale*  
*Pastinaca sativa*  
*Ferula communis*  
*Ferula graveolens*  
*Ferula Asafoetida*  
*Ferula Opoponax*  
*Ferula Orientalis*  
*Ferula persica*  
*Angelica Archangelica*  
*Angelica sylvestris*  
*Imperatoria Ostruthium*

## CUCURBITACEAE.

*Ecballion elaterium*  
*Charantia Balsamina*  
*Cucumis sativus*  
*Cucumis melo*  
*Cucumis Colocynthis*  
*Cucurbita Pepo*  
*Cucurbita citrullus*  
*Bryonia alba*  
*Bryonia dioica*

## GOSSULLAREAE.

*Ribes rubrum*  
*Ribes nigrum*  
*Ribes grossularia*

## CACTEAE.

*Cactus coccinillifer*

## MYRTACEAE.

*Eucalyptus resinifera*  
*Melaleuca Leucadendron*  
*Myrtus communis*  
*Myrtus Pymenta*  
*Myrtus caryophyllata*  
*Myrtus acris*  
*Myrtus Cariophyllus*  
*Punica granatum*

## ROSACEAE.

*Rosa centifolia*  
*Rosa gallica*  
*Rosa canina*

## POMACEAE.

*Mespylus Azarolus*  
*Mespylus germanica*  
*Pyrus communis*  
*Pyrus Malus*  
*Pyrus Cydonia*  
*Sorbus domestica*

## AMYGDALAEAE.

*Amygdalus communis*  
*Amygdalus Persica*  
*Armeniaca vulgaris*  
*Prunus domestica*  
*Prunus spinosa*  
*Prunus Laurocerasus*  
*Prunus Mahaleb*  
*Prunus Cerasus*

## FRAGARIAEAE

*Geum urbanum*  
*Potentilla reptans*  
*Potentilla Tormentilla*  
*Fragaria vesca*  
*Rubus fruticosus*  
*Rubus Idaeus*

## SALICARIAE.

*Lythum Salicaria*  
*Lawsonia inermis*

## TAMARISEINEAE.

*Tamarix gallica*

## LEGUMINOSAE.

*Cassia fistula*  
*Cassia absus*  
*Cassia Senna*  
*Cassia orientalis*  
*Caesalpinia echinata*  
*Moringa Zeylanica*  
*Haematoxylon Campechian.*  
*Hymenaea Courbaril*  
*Myroxylon Peruiferum*  
*Pterocarpus Draco*  
*Pterocarpus Santalinus*  
*Ceratonia siliqua*

*Centaurea benedicta*  
*Myroxylon Toluiferum*  
*Copaifera officinalis*  
*Tamarindus indica*  
*Acacia vera*  
*Acacia Catechu*  
*Spartium junceum*  
*Cytisus Laburnum*  
*Ononis arvensis*  
*Trigonella foenum graecum*  
*Melilothus officinalis*  
*Lotus hirsutus*  
*Psoralea bituminosa*  
*Psoralea glandulosa*  
*Psoralea pemptaphylla*  
*Indigofera tinctoria*  
*Liquiritia officinalis*  
*Galega officinalis*  
*Colutea arboreascens*  
*Astragalus gummifer*  
*Astragalus verus*  
*Astragalus excapus*  
*Cicer arietinum*  
*Vicia sativa*  
*Vicia Ervilia*  
*Faba vulgaris*  
*Ervum Lens*  
*Pisum sativum*  
*Lathyrus tuberosus*  
*Arachis hypogaea*  
*Phaseolus romanus*  
*Dolichos Catiang.*  
*Stizolobium pruriens*  
*Lupinus albus*

## ANACARDIAEAE.

*Rhus coriaria*  
*Rhus Cotinus*  
*Rhus Toxicodendron*  
*Rhus Coppalinum*  
*Amyris Elemifera*  
*Amyris Opobalsamum*  
*Amyris Kataf*

**ANACARDIACEAE—continued.**

*Pistacia vera*  
*Pistacia Terebinthus*  
*Pistacia Lentiscus*

**RHAMNÆ.**

*Ilex vomitoria*  
*Rhamnus catharticus*  
*Rhamnus Frangula*  
*Zizyphus vulgaris*

**RANUNCULACEAE.**

*Actea spicata*  
*Peonia officinalis*  
*Delphinium Staphysagria*  
*Delphinium Consolida*  
*Delphinium montanum*  
*Aconitum Napellus*  
*Aconitum Anthora*  
*Aconitum Lycoctonum*  
*Aconitum Pyrenaicum*  
*Aquilegia vulgaris* & *Cand.*  
*Nigella damascena*  
*Nigella sativa*  
*Clematis Flammula*  
*Anemone pratensis*  
*Anemone Pulsatilla*  
*Ranunculus sceleratus*  
*Eranthis hyemalis*  
*Helleborus niger*  
*Helleborus foetidus*  
*Helleborus viridis*  
*Clematis Vitalba*

**CRUCIFERÆ.**

*Raphanus sativus*  
*Raphanus Raphanistrum*  
*Isatis tinctoria*  
*Anastatica hierochuntica*  
*Lepidium sativum*  
*Lepidium latifolium*  
*Cochlearia officinalis*  
*Cochlearia Armoracia*  
*Nasturtium officinale*  
*Barbarea vulgaris*

*Cheiranthus Cheiri*  
*Sisymbrium officinale*  
*Erysimum Alliaria*  
*Brassica Napus*  
*Brassica oleracea*  
*Brassica Rapa*  
*Brassica Eruca*  
*Sinapis nigra*  
*Sinapis alba*

**MAGNOLIAE.**

*Drymis Winteri*  
*Liriodendron Tulipifera*  
*Illicium anisatum*

**MENISPERMÆ.**

*Cocculus suberosus*  
*Cocculus palmatus*  
*Cyssampelos Pareira*

**BERBERIDEÆ.**

*Berberis vulgaris*

**PAPAVERACEAE.**

*Papaver somniferum*  
*Papaver Rhoeas*  
*Chelidonium majus*  
*Glaucium luteum*

**VIOLARIEÆ.**

*Viola Ipecacuanha*  
*Viola odorata*  
*Viola tricolor*

**POLIGALEÆ.**

*Polygala vulgaris*  
*Krameria triandra*  
*Krameria Ixina*

**CARYOPHYLLEÆ.**

*Gypsophila Struthium*  
*Saponaria officinalis*  
*Dianthus Caryophyllus*  
*Cucubalus Behen*

**LINEÆ.**

*Linum catharticum*  
*Linum usitatissimum*

**HYPERICINEÆ.**

*Hypericum perforatum*, &c.

**MALVACEAE.**

*Malva rotundifolia*  
*Malva sylvestris*  
*Althaea officinalis*  
*Althaea rosea*  
*Lavatera arborea*  
*Gossypium herbaceum*  
*Hibiscus Abelmoscus*  
*Hibiscus esculentus*

**STERCULIACEAE.**

*Theobroma Cacao*

**TILIACEAE.**

*Tilia europea*  
*T. Americana*

**THEACEAE.**

*Thea viridis*  
*Thea bohea*

**AURANTIACEAE.**

*Citrus Medica*  
*Citrus Aurantium*  
*Citrus vulgaris*  
*Citrus Limetta Bergamium*  
*Citrus Limonum*

**GUTTIFERAE.**

*Garcinia Gambogia*

*Cannella alba*  
*Calophyllum inophyllum*  
*Stalagmitis Cambogioides*  
*Wateria indica*

**ACERINEAE.**

*Acer Saccharinum*

**CASTANEACEAE.**

*Aesculus hippocastanum, &c.*

**VITES.**

*Vitis vinifera*

**TROPAEOLEAE.**

*Tropaeolum majus*

**OXALIDEAE.**

*Oxalis Acetosella*  
*Oxalis cornicula*

**RUTACEAE.**

*Guaiacum officinale*  
*Bonplandia trifoliata*  
*Ruta graveolens*  
*Dictamnus albus*

**SIMARUBACEAE.**

*Quassia amara*  
*Simaruba officinalis*

**CORIARAE.**

*Coriaria myrtifolia*

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**TOXICOLOGY.**

VEGETABLE POISONS ARE DIVIDED INTO FIVE CLASSES :

1. Irritative or acrid poisons.
2. Narcotic poisons.
3. Narcotico-acrid poisons.
4. Sedative poisons.

*Amygdalinæ*, by inducing death vehemently, without lesion or post mortem developments of extensive injury or inflammation of any kind—as by Hydrocyanic acid, Bay-rum, Cherry-Laurel water, oil of bitter Almonds, the cordial noyua, &c.

Anacardiaceæ, by a volatile principle which operates toxicologically when externally applied, as well as if internally introduced.

Apocynæ, } by the Strychnia and Brucia the plants of this  
Strychnæ, } tribe contain.

Asphodeleæ, by Scillitina and the volatile essential oil of some genera.

Chenopodeæ, by the essential oil of the leaves and seeds of some species of one genus.

Cinchonaceæ, by the Emetina contained in the roots.

Colchiaceæ, by the Veratria of the bulbs and seeds.

Compositæ, by the Lactucarium of some genera.

Coniferæ, by the volatile essential oil of some genera.

Convovulaceæ, by an acrid principle in one or two genera.

Coriariæ, by a deleterious principle, inducing tetanic symptoms on animals.

Cucurbitaceæ, by the Elatina contained in the juice of the fruit of one genus, and the Colocynthine of the bitter extractive of the fruit of another genus—by an acrid deleterious principle in another genus.

Dipterocarpeæ, by the camphor.

Euphorbiaceæ, } by an acrid principle in the fixed oil, and  
Tithymaloideæ, } by the oleo-resin of two—acting also when  
externally applied.

Fungi, by the Amanatine pervading the deleterious genera of the tribe,—inducing narcotism on man, and effects on animals like those of opium.

Gramineæ, by an unknown principle in the diseased state of the grain of some genera, and by a deleterious unknown principle in one.

Guttiferæ, by the Gamboge, or a bitter yellowish or yellow principle pervading the whole tribe.

Leguminosæ, by the Cytissina of some of the genera.

Laurineæ, by the camphor.

Liliaceæ, by an acrid principle in the bulbs.

Lobeliaceæ, by an unknown acrid principle in the roots and seeds of some genera.

Melanthaceæ, by the Veratria of the roots.

Menispermæ, by the Picrotoxine of the berries of some genera.

Papaveraceæ, by Morphia and its modifications, and by Narcotina and its modifications, and a peculiar principle of an acrid nature of some genera.

Phytolacceæ, by an unknown principle.

Piperaceæ, by Piperina, probably in some peculiar state of combination with some other principle, in inordinate doses.

Podophylleæ, by an unknown principle of the leaves and roots.

Rosaceæ, } by the Hydrocyanic acid contained in many of  
Ericææ, } the plants of these families.

Rununculaceæ, by the Aconita, and similar principles of the plants of this family.

Thymeleæ, by an acrid principle in the bark and roots—acting also when externally applied.

Umbelliferæ, by Atropia, Solania, Daturia, Nicotina, Conia, and similar principles,—inducing Narcotism.

### VEGETABLE POISONS.

A species of *Strychnos* according to Leschenault in Java, yields the upas tiute.

*Antiaris toxicaria* of Leschenault, yields the upas antiar of Java.

Woorara, is a poison which indians in Guiana, put on the points of their arrows—an extract from various plants.

Ticunas, according to De la Condamine, is an extract from various plants in North America. Fontana's experiments showed it occasioned death externally applied, and internally given—this poison does not differ much from Woorara.

*Hippomane Manchenella*.

*Chærophyllum sylvestere*.

*Coriaria myrtifolia*.

*Sium latifolium*.

*Æthusa cynapium*.

*Amanita bulbosa*,  
*Amanita verna*, } fungi.  
*Amanita citrina*,

*Strychnos nux vomica*.

S——— *St. Ignatia*.

*Brucea antidysenteria*.

*Jatropha curcas*.

J——— *Manihot*.

*Croton tiglium*.

*Anacardium occidentale*.

*Rhus toxicodendron*.

——— *vernix*, &c. &c.

*Chelidonium majus.*

*Clematitis*

*Anemone pulsatilla.*

*Sanguinaria canadensis.*

*Podophyllum peltatum.*

*Delphinium stavisagria.*

D—— elatum.

D—— consolida, &c.

*Nerium oleander.*

*Ruta graveolens.*

*Mercurialis perennis.*

*Solium temallatum.*

*Triticum* } wheat and rye when diseased—as ergot.  
*Secale,* }

*Cicuta maculata.*

*Conium maculatum.*

*Cicuta virosa.*

• *Digitalis purpurea.*

*Amygdalus persica.* (The peach tree, leaves of it.)

*Nicotiana tabacum, rustica, &c.*

*Datura stramonium.*

D—— ferox.

D—— talula.

D—— arborea.

D—— metel.

*Atropa belladonna.*

*Hyoscyamus nigr.*

*Aconitum napellus.*

*Cimicifuga serperlaria.*

*Actæa spicata.*

*Taxus baccata.*

*Physalis alkengi,* } and other species.  
*P—— somnifera,* }

*Ervum erviha.*

*Paris quadrifolia.*

*Gelseminum nitidum* of michaux, (yellow jessamine) according to Beck 2. p. 426.

*Solanum dulamara.*

*Amygdalus communis,* (the bitter variety.)

*Rhododendron chrysanthum,* } and other species.  
*R—— maximum,* }

*Kalmia latifolia, angustifolia, glauca,* (the leaves and berries.

*Prunus lauro-cerasus*.

*P. avium*.

*P. padus*.

*Oxalis acetocella*, by its acid.

*Tanacetum vulgare*.

*Symplocarpus foetida*.

*Phytolacca decandra*, and other species, the berries root and old plant—the young shoots, or turiones are esculent.

*Arum maculatum*,  
*A—dracontium*,  
*A—dracunculus*,  
*A—seguinum*,  
*A—triphyllum*, } and other species.

*Scölantheas quadrangus*.

*S—*—*forsklii*.

*S—*—*glandulosus*.

*Pastinaca sativa*.

*Clematis vitalba*.

*viorna*.

*virginiana*

*Hydrocotyle vulgaris*.

*Asclepias gigantea*,  
*Apocynum androsaemifolium*,  
*A—cannabinum*,  
*A—hypericifolium*,  
*A—venetum*, } and other species.

*Lobelia inflata*,  
*L—syphilitica*,  
*L—cardinalis*, } and probably all the species more or less.

*Plumbago Europæum*.

*Pedicularis palustris*.

*Fritillaria imperialis*.

*Sedum acre*.

*Scilla maritima*.

*Narcissus pseudo-narcissus*.

*Ruscunculus acris*,  
*R—scleratus*,  
*R—bulbosus*,  
*R—arvensis*, } probably other species.

*Caltha palustris*.

*Colchicum autumnale*.

*Oenanthe fistulosa*.

*O—crocata*.

*Aconitum napellus*

*A—anthora*.

A——— *lycoctonum*.

A——— *cammarum*.

*Anemone pulsatilla*,  
*Anemone pratensis*, } probably the American species also.

*Juniperis sabina*.

*Euphorbia officinarum*.

E——— *lathyris*.

E——— *cytharissias*.

E——— *tiraculli*.

*Daphne mezereum*.

D——— *gnidium*.

D——— *laureola*.

*Holigarna longiflora*, the berries in India yield a hard, black, resinous varish.

*Schinus molle*—Arueira; shrub, giving out resin when immersed in water.

*Schinus arroeira*—causes swelled legs in those who sleep under its shade—St. Hillaine.

*Cassuvium occidentale*—(Virey.)

*Coronilla varia*.

*Mimosa*—the root of a species of it, called *spongia*, in Brazil, a poison.

*Lathyrus aphaca*—(the seeds.)

*Galego purpurea*—(Tephrosia) leaves and berries used for poisoning fish.

*Baptisia tinctoria*.

*Dolichos pruriens*.

*Ricinus communis*.

*Stalagmitis gambogoides*.

*Cucumis colocynth*.

*Cucumis agrestis*.

*Momordica elaterium*.

*Bryonia dioica*.

*Helleborus fœtidus*.

H——— *niger*.

*Veratrum viride*.

V——— *album*.

V——— *sabadilla*.

*Caltha palustris*.

*Piper methysticum*, Ava or Otaheite, Java root.

*Piper cubeba*, *Piper betel*, *Piper siriboa*, *Piper inebrius*.

*Spigelia marilandica*.

*Cuscuta Americana.*

C——— *Europæa.*

*Sambucus nigra.*

*Anacardium occidentale.*

*Semecarpus anacardium*, (Shylet marking-nut.)

*Melanerhea usitatissima*, (Varnish of Martaban.)

*Stagmaria verdiciflua*, (black hard varnish of Indian archipelago.)

D——— *Mezereon.*

*Narcissus pseudo-narcissus*, daffodil.

*Savin.*

*Jalap* in large doses, more poisonous than scammony.

*Black pepper* in large quantities.

*P. culeba*,  
*P. nigrum*, } poisonous occasionally.  
*P. longum*, }

*P. betel*,  
*P. Siriboa*, } the betel of the Malays

*P. inebrius*, South Sea islanders prepare an intoxicating beverage from it.

*Cestrum physalis*, *alkekengi.*

*Coriaria myrtifolia*, the leaves are said occasionally to be imported in parcels of senna.

*Secale cornutum*, spured maize, *lolium temulentum*, darnel.

### ANACARDIACEÆ—Cashew-nut tribe.

Tropical America, Africa and India, chiefly: a few North and South of tropics—others inhabit Europe and North America, Northern India, and cape of good hope, Duvana and *Schinus*, exclusively in Chile.

*Mangofera*, *Mango pint.*

*Semecarpus anacardium*—varnish of Sylhet.

*Melanorhoa usitatissima*—martabon varnish.

*Anacardium occidentale*, *omnem.*

*Stagmaria verniciflua*—Indian archipelago, cashew nut and black varnish.

*Holigarna longiflora*—a varnish from the berries.

*Schinus Molle*, full of resin like mastic, used by peruvians for the gums.

*S. Arrocina.*

*Rhus coriaria*,  
*Rhus typhium*, } used by tanners in the United States in  
*R. Vernix*, } making morocco.

*R. Glabrun.*

*R. Toxicodendron.*

*R. Cotinus*, variety of *radicans*.

*Cassuvium occidentale*, this cashew nut, Virey says affects the brain singularly.

*Pistachia atlantica*, }  
*P. ——— lenticus*, } mastic.

*P. Terebinthus*, Scio terpetine.

*P. Lentiscus*, pistach fruits.

*Comocladia*, several species stain the skin black.

#### AMENTACEÆ.—Same as Salicianæ, which see APOCYNEÆ.

Natives of same places as *Asclepiadæ*—purgative, acrid and febrifuge qualities.

*Cerbera manghas*, purgative.

*Echites antidysenterica*, astringent.

*Nerium oleander*, gallic acid and febrifuge.

*Urceola elastica*, }  
 and the *Vahea* of Madagascar, } caoutchouc.

*Nerium odoratum*, bark of root in India, repellent externally, internally a poison.

*Tabermontana utilis* of Arnott, yields a copious stream of thick rich milky fluid, without acrimony, (Jamesons Journal, April 1830.) Christison analysed the milk and found in it

Caoutchuc, and a peculiar resin.

*Yocanga* in Madagascar, bird lime.

Cream fruit, Sierra Leone of this family.

*Urceola prodices*, the caoutchuc of Samatra.

*Plumeira obtusa*, cathartic in Java.

*Wrightia antidysenterica*, conessi bark of British mat. med.

*Palapatta* of Hindoos of Malabar, tonic febrifuge.

*Wrightia tinctoria*, used by dyers, indigo colour.

*Periploca indica*, sarsaparilla of India.

*Allamanda cathartica*, a purgative.

*Cynanchum arguel*, senna of Egypt.

*Cerbera tanghin*, powerful poison in Madagascar, one seed will kill 20 persons. (Tanghin tree.)

*Strychnos nux vomica*.

*S. Colubrina*, anthelmintic and febrifuge of Java.

*S. St. Ignasii*, papeeta of India, mixed with *cocos* Maldivia, (Jehiree or Durreoaye Narriol) used in cholera, poisonous in over dose.

*S. pseudo-quinina* of Brazil, powerful febrifuge, contains no *Strychnina* according to Vauquelin, the pulps of the fruit of this and *nux vomica*, are eaten with impunity.

Calliard found a species of *Strychnos* in Nubia with a sweet and not unwholesome fruit.

*Apocynum androsæmifolium*.

*A. Cannabinum*.

*A. Hypericifolium*, in the United States, contain emetina.

### ASCLEPIADEÆ, the milk weed tribe.

Tropical India, and New Holland.

Equinoctial America.

*Cynanchum tomentosum*, } emetics.  
*Periploca emetica*,

*Asclepias decumbens*, } sudorific and carminative.  
*A. ——— tuberosa*,

*Periploca esculenta*, } edible.  
*Asclepias aphylla*, }  
*A. ——— stipitacea*,

*Gymnema lactiferum*, cow plant of Ceylon, or Kiriaghuna plant, yields a milk used by the Cingalees for food.

*Asclepias volubilis*.

*A. ——— vincetoxicum*, produce sickness and expectoration.

*Diploplesis vomitoria*, acts in India like *Ipecac*.

*Asclepias currassavica*, used in gleets, bloody flux, and flour albus.

*Calotropis gigantea*, Akund, Yercum, or Mudar plant of India, alterative and purgative in leprosy, elephantiasis, and worms, (Anislie.)

*Cynanchum, oleaefolium*, one of the plants yielding *Alexandria Senna*.

**ARISTOLOCHIÆ.**—The birth root tribe yields a stimulant principle.

The plants of this family are herbaceous, with alternate simple petiolate leaves, apetalous flowers, calix tubular and valvate—grows in Europe, North America, and India.

N. America, rare.

Europe and Siberia, rare.

India, sparingly.

Mediterranean, sparingly.

*Aristolochia braeteata*, anthelmintic of India, in leaves.

*A longa,*  
*A rotunda,* } roots.  
*A clematitis,*  
*A serpentaria,* }  
*A tomentosa,* } Virginia snake root.  
*A hastata,* }

*A indica,* bitter, India.

*A odoratissima,* of India, very bitter.

*A fragrantissima,* Star Reed, called in Peru *Byrica de la estrella*. The root antidyenteric, and in malignant fever.

6. *Aristolochia Indica*.

7. *Aristolochia sempervirens*.

8. *Aristolochia hirsuta* of Muhlenburg, (synonymous with *A tomentosa* of Nutt.)

9. *Aristolochia sagittata* of Muhlenburg, (synonymous with *A hastata* of Nutt.)

The leaves and roots of 4 are used, besides a volatile oil. The plant contains an acrid fixed oil, and a peculiar principle denominated Cytissine, a dark yellow substance, resembling an extract, with a bitter, nauseous taste, and attracting humidity when exposed to the air; very soluble in water and weak alcohol—almost insoluble in strong alcohol and ether; is neither acid nor alkaline;—is not precipitated by any of the following; acetate of lead, nitrate of silver, and of mercury, the sulphates of copper and of iron, the hydrochlorates of baryta, lime, and tin. Acts violently on the system; induces vomiting, purging, and intestinal inflammation. M. Chevalier discovered this principle in the seeds of Laburnum, (*Cytissus Laburnum*), hence its name Cytissina. He was nearly poisoned by taking eight grains of it.

The roots of *Asarabacca* were analysed by M. J. L. Lassaigne and M. Fenuelle. They found in it,

1. A concrete, volatile oil, identical with, or closely allied to camphor.

2. a very acrid, fixed oil.

3. Cytissine.

4. Fecula.

5. Gum.

6. Ulmin.

7. Citric acid, besides citrate of lime and malate of lime.

8. An acetate.

9. A salt with an ammoniacal base and some mineral salts. Several of these substances are not found in the leaves

The French writers attribute the errhine properties of this plant to Cytissine. It is likely owing to the acrid fixed oil; most active in the fresh state.

According to Thiebaud, M. Berneaud, and M. Tenore, recognise the Baccharis of Virgil, which was formerly used in making crowns, to be this Asarum. It grows abundantly in the mountainous districts of Italy.

Consult Barton's Cullen's Mat. Med. for the errhine properties.

The American species, No. 1, is worth an inaugural dissertation.

2, 3, 4, and 5 are seldom used in the United States.

6, is used in the East Indies.

7, according to Forskhal, is used by the Arabians as a counter poison.

8 and 9, are mixed with Virginia Snake Root.

Chevallier found in the roots of No. 1 a volatile oil.

2, a yellow, bitter principle, soluble in water and alcohol.

3, resin.

4, gum.

5, starch.

6, albumen.

7, lignin and various salts.

Bucholts obtained from 1,000 parts,

5 of a green, volatile oil.

28.5 of a yellowish green resin.

17 of extractive matter.

181 of gum in extract.

624 of lignin, and

144.5 of water.

*Toxicological aspect of the family as known in the Materia Medica.*

As a group, not poisonous. The Virginia Snake Root is stimulant, but does not show any untoward effect on the system judiciously used. It is an important medicine.

Cytissina in Asarabacca, may be said to be capable of poisoning. Children are frequently injured by eating the seeds of Laburnum.

## AMYGDALÆ.—The Almond tribe.

Cold or temperate climes of the northern hemisphere, one species *Cerasus occidentalis*, native of W. Indies—one in Mexico, one in Cochin China.

Yields Hydrocyanic acid, in leaves and kernels, and Cerasin. *Cerasus Virginiana*, U. States.

*C. capollim*, Mexico, febrifuge astringent, the bark of the root, antidisenteric.

*C. capricida*, kills the goats of Nipal.

*C. caroliniana*, the leaves destroy cattle which feed on them.

Prunes, (plumb and apricot.)

*Cerasus*, (cherry.)

*Anygdalus*, (peach.)

*Prunus*, *spinosa*, sloe.

*Cerasus avium*, wild or bird cherry, the leaves a substitute for tea.

*Prunus domestica*, prunes.

*P. brigantia*, yields a fixed oil, called *huile des marmottes*, used instead of olive or almond oil.

*P. spinosa*, a febrifuge bark in Calabria, (M. Tenore.)

*Kirschenwasser*, a dangerous liquer, prepared in the *vesges* and black forest, is from a variety of *prunus avium*.

Peach flowers, laxative to children—*Noyau*, a liquer, is flavoured by the kernel of *Cerasus occidentalis*.

## ARTOCARPEÆ.—The bread-fruit tribe.

The tropics, particularly of the Indies, the mulberry and *Maclaura* in Canada, and the United States, the fig in Persia.

*Dorstenias* are herbaceous Brazilian weeds.

*Morus tinctoria*, fustic.

*M. rubra*.

*M. alba*—contains in its bark, myroxylic acid with lime.

*M. papyrifera*.

The cow-tree of South America is here.

*Maclura aurantiaca*, osage apple—dies yellow, like fustic; used for making bows by North American Indians.

*Ficus Religiosa*, Banayan tree, the seeds cooling, and alterative in India.

*F. septica*, the leaves esteemed by the Cochin Chinese, caustic, and anthelmintic.

*Ficus racemosa*, astringent.

*F*—— *Indica*, its white juice cures tooth ache; gum lac is obtained from it abundantly.

### AURANTIACEÆ.—The Orange tribe.

Well known in the tropics, and a wild orange in Brazil.

*Cookia punctata*, Wampee, of China and the Indian Archipelago, a fruit much esteemed.

*Glycosmis citrifolia*, the berries delicious—also those of *Triphasia trifoliata*. Oranges very prolific, a single tree of St. Michael's orange produced 20,000 oranges fit for packing, exclusive of the waste and damaged fruit, one-third more.

*Feronia elephantum*, yields a gum like *G. Arabic*—the young leaves bruised smell like anise.

### AMYRIDEÆ.—The Balm of Gilead tribe.

Tropics of India and America, and one species in Florida.

Fragrant resinous shrubs.

*Amyris*, hexandra (D. Hamilton,) yields gum elemi.

Virey says the Niouttout of Adanson, yields gum resin, called *Bdellium*.—See *Umbellifere*.

Nubian Mahomedans were found by M. Cailliaud, to have used the layers of the bark, (liber,) of a species of *Amyris* to write their legends on.

*Amyris toxifera*, poisonous.

*A. ambrosiaca*, produces the resin of *Coumia*.

### BIGNONIACEÆ.—The Trumpet Flower Tribe.

The tropics of either hemisphere, and from Pennsylvania, to Chile, in North and South America.

Chica is a red seculent substance, obtained by boiling the leaves of *Bignonia Chica* in water—the Chica is precipitated, by adding some chips of an unknown bark, called *Aryana*—used by the Indians to paint themselves red—approaches the nature of a resin, but has peculiar properties; dyes cotton orange red. Several species of *Bignonia*, form large trees in Brazil, of hard wood, fit for ship timber—one, the *Ipeuma*, is the hardest wood of Brazil. The *Ipetobacco*, furnishes the best ship timber.

*B. Catalpa*—the *Catalpa* tree of the United States.

*B. Cruciata.*

*B. radicans.*

### BORAGINEÆ.—The Borage Tribe.

Temperate countries of Northern hemispheres—a few in the United States.

*Anchusa tinctoria* alkanet root—deep purple dye.

<i>Lithospermum tinctorium,</i>	} the roots used by dyers—red-dish brown.
<i>Onosma achinoides,</i>	
<i>Echium rubrum,</i>	
<i>Anchusa virginica,</i>	
<i>Borrago officinalis.</i>	

### BERBERIDEÆ.—The Berberry Tribe.

Chiefly the mountainous places of the temperate parts of Northern hemispheres—South America, as far as the straits of Magellan.

*Berberis vulgaris* yields sugar and an acid—the acid is oxalic. Root yields a yellow dye—the bark used by dyers on account of its astringency.

### CALYCANTHEÆ.—Carolina Allspice Tribe.

North America and Japan.

*Calycanthus floridus.*

### CHENOPODEÆ.—The Goose-foot Tribe.

Weeds in waste places throughout the world—most common in ultra tropical regions.

<i>Atriplex hortensis</i> , (its seed produce vomiting,	} Esculent.
garden orach.	
<i>Spinachia</i> spinach.	
<i>Beta vulgaris</i> , beet.	
Mangel Wurtzel.	
<i>Chenopodium spinosa.</i>	
<i>C. album</i> , in Pennsylvania.	

<i>Salsola</i> , all of them,	} Yielding immense quantities of soda.
<i>Salicornias</i> , all of them,	

*Chenopodium anthelminticum*, essential oil.

<i>C. Botrys,</i>	} also an essential oil.
<i>C. Ambrosyoides,</i>	

*C. Vulvaria.* M. Chevallier remarked that this species exhales pure ammonia during its whole existence; this is the only observation existing of a gaseous exhalation of azote by vegetables, though numerous proofs are extant of the exhalation of oxygen.

## CARYOPHYLLÆ.—The Chickweed Tribe.

Temperate and frigid parts of the world—in hedges, rocks, mountainous and waste places. In the tropics they are on high elevation, near eternal snow. Generally insipid qualities.

Saponaria officinalis,	} have saponaceous properties; the first has been used in medicine.
Gypsophila ostruthium,	
Lychnis dioica,	
L. calcedonica,	
Dianthus caryophyllata.	

## CONIFERÆ.—The Fir Tribe.

Various parts of the world, from the eternal snows of arctic America, to the hottest regions of Indian Archipelago—of universal importance to man in innumerable ways.

1. PINUS ABIES, (*Abies rubra*.) Yellow-leaved Fir—Norway Spruce Fir. Yields common Frankincense, by spontaneous exudation and incision—tops used to make spruce-beer.

2. PINUS BALSAMUM. Balm of Gilead Fir. Yields Canada Balsam; highly fragrant.

3. PINUS LARIX. Larch. Exudes Orenburgh Gum, and Briançon Manna—also, by boring, common Venice Turpentine.

4. PINUS SYLVESTRIS. The wild Pine, or Scotch Fir. Yields common Turpentine; inner bark esculent, raw or baked into cakes; tar distilled from it; lampblack obtained by burning it.

5. PINUS CEMBRA. Yields the fine-scented Briançon Turpentine—its shoots, by distillation, the genuine Riga Balsam.

6. PINUS PICEA. Yields Strasburg Turpentine, by puncturing the small vesicles of bark which contain it—and common Turpentine, by larger incisions.

7. PINUS CANADENSIS. Hemlock Spruce. Yields Hemlock Turpentine, called Hemlock Gum.

8. PINUS PALUSTRIS, and some other species producing the *Terebinthina empyreumatica*, or impure turpentine, procured by burning, called *Pix liquida*, or common Tar.

The whole of the extensive natural family *Coniferæ*, yields turpentines of different qualities and effects; some being purely balsamic, while others are stimulating, and highly rubifacient. The true *Terebinthus* of the ancients, is not obtained

from the genus *Pinus* or *Abies*, but from the *Pistachia Terebinthinus*; its concrete is called Chio or Cypress Turpentine. All the terebinthinate products, however, called *Terebinthina*, by the colleges, are characterized by a certain similitude of generic quality, if I may speak thus; but as we use for medical purposes, certain preparations of them, I shall here briefly enumerate them, referring you to the cabinet specimens, for better information, on the peculiarities of each, than description can give; and to the details of the lectures, for an exposition of the peculiar medical virtues, effects, and uses, of the whole.

1. *Terebinthina Canadensis*. From species No. 2; called Canada Balsam; *Resina liquida*. Canada Turpentine.

2. *Terebinthina Chia*. Cypress Turpentine, from *Pistachia*, which see.

3. *Terebinthina vulgaris*. Common Turpentine; Horse Turpentine—from species No. 4.

4. *Terebinthina Veneta*. Venice Turpentine—from species No. 3.

5. *Terebinthina Argentoratensis*. Strasburg Turpentine—from species No. 6.

6. *Hemlock Turpentine*. A dark, terebinthinate exudation, from the tree which produces hemlock scantling; and which is extensively used, in the United States, instead of Burgundy pitch, as a rubificent. One cabinet specimen, is from Silver Lake, where a good deal of it is collected, as well as in the Eastern States.

7. *Pix abietis*. The *resina præparata*, of species No. 1,—called Burgundy pitch.

**TEREBINTHINÆ OLEUM.** Oil of Turpentine—(called Spirit of Turpentine.)

Hungarian Balsam is obtained from *Pinus Pumilio*.

Burdeaux Turpentine, from *Pinus Pinaster*.

Carpathian Balsam, from *Pinus Pinea*.

Strasburg Turpentine, from *Pinus Pectinate*, (*P. Picea*.—*Lin.*)

Liquid Storax, is thought to be yielded by Dammar Pine, and a substance called in India Dammar, or country resin, is procured from the same plant, or from a tree called by Dr. Buchanan Chloroxylon Dupada.—(*Ainslie*, I. 337.)

Sandarach, is said by Dr. Thompson, to exude from the

*Juniperus Communis*. This is, I think, doubtful. I am inclined to think that Brongniart and Schousboe are correct in referring it to the *Thuja auriculata*, (or *Vuadrivavvis*,) of which tree it is said by them to be the tears.

The Larch yields tannin powers.

*Juniperus Sabina*, Savin, stimulating, diuretic—as also the berries of *Juniperus Communis*, Juniper berries, an ingredient in flavouring gin.

The large seeds of many of the *Coniferae* are esculent; the Stone pine of Europe, the *Pinus Cembra*, the Ginkgo, the *Pinus Lambertiana* and *Gerardiana*, the *Araucaria Dombeyi*, and *Podocarpus Nereifolia*, are all edible, when fresh. The succulent envelope of the fruit of the *Taxus baccata*, or Yew tree, is foetid, and according to Decandole is poisonous. The seeds, if eaten, are manifestly deleterious.

#### CRUCIFERÆ.—The Cruciferous tribe.

General throughout the world, but chiefly a European family.

Antiscorbutic, contains ammonia and stimulant properties, combined with an acrid flavor. Universally and uniformly the same, varying only in intensity of flavor and extent of power.

The family contains a great deal of azote—hence their putrid animal odour in rotting.

*Sinapia nigra*.

S.—— *alba*.

S.—— *chinensis*—seeds in India and China, stimulant and stomachic laxative.

*Arabis chinensis*, (Rottler) the same.

Rape seed—horse-radish—common.

Radish—salmon radish.

Cabbage—kale.

Cauliflower.

Water cresses—pepper grass, are all found here.

*Sisymbrium amphibium*.

*Sisymbrium aquaticum*.

*Arabis byrata*, &c. &c.

*Erysimum Barbearea*, hedge mustard.

*Turritis*, different species, &c. &c.

#### CUCURBITACEÆ.—The Gourd tribe.

Native of the hot countries of both hemispheres, chiefly within the tropics—a few in Europe and North America and

Cape of Good Hope—India their favourite location. A bitter laxative property, in the whole tribe more or less concentrated or diffused—in the larger cultivated fruits the pulp is saccharine and deliciously cooling, and diuretic, as in the melon, the cucumber, and the choco.

The colocynth goard is poisonous by reason of its colocynthin—yet Thunberg says the goard is so prepared at the Cape of Good Hope, as to be a mild and esculent pickle.

*Benincassa cerifera*—secretes during its ripening, on the surface of its fruit, a waxy substance.

*Feuillea cordifolia*—the leaf of it, according to M. Drapiez, is an antidote to vegetable poisons.

*Trichosanthes palmata*, of India—the fruit pounded and mixed with warm coco-nut oil, is used for cleaning and healing ill-conditioned sores in the ears, also introduced up the nostrils in ozæna.

*Bryonia alba*, is drasatic purgative.

*Momordica elaterium*, yields elatina—six grains from forty fruit—(Clutterbuck.)

*Bryonia cordifolia*, is cooling and expectorant—Ainslie, 2. 21.

*B*——— *rostrata*—the root is used in India as an electuary for piles.

*B*——— *epigæa*—root very bitter approaching in quality the columbo root, which it was formerly supposed to yield.

*B*——— *scabra*—the tender shoots and leaves roasted are aperient.—Ainslie, 2. 212.

*Jollifia africana*—seeds as large as a chestnut, said to be as good as almonds.

The seeds of the whole family, like those of the Leguminosæ do not partake of the properties of the pulp which surrounds them. Those of this family under consideration are oily and yield an abundance on pressure—said to be equal to oil of olives.

#### CINCHONACEÆ.—The Cinchona tribe.

There are several sub-orders in this family, within the tropics almost exclusively where they are conjectured to form about one-twenty-ninth of the whole number of flowering plants. One is in Georgia, and one as far north as Canada.—Emetic and febrifuge. Dependent on the bitter tonic astringent principles residing principally in the barks chichonia

and quinia, exist in the cinchonas; combined with kinic acid. Dr. Serturer obtained another vegeto-alkaloid from the Peruvian barks which he called Chiniodia. M. M. Henry, and Debondre, deny its existence, (Brand's Jour, N. S. July, 1830, p. 422.)

Cinchona ferruginea,	} grow in Brazil, where they are	
C. ——— vellozii,		used as Peruvian barks, but are
C. ——— Remigiana,		inferior.

Portlandia hexandra, Coutarea speciosa (of Aublet,) of French guiana, resembles in properties the cinchonas of Peru.

Exostemma floribunda, yields the quinquina piton and the Q ——— des Antilles, is remarkable for possessing similar properties to those of the true quinquina (loxa bark,) while not a trace of either cinchonine, or quinine is found in it. Lindley. On this account Vahl's name of Cinchona floribuda or montana which I adopted for this bark in preference to Exostemma, in No. 19 of my Outlines, vol. II. p. 97, I would now abandon, and reinstate that of the genus above, which in the Outlines is placed as a synonym. Is this the bark called St. Domingo bark, in commerce?

Rondelitia febrifuga is a febrifuge bark obtained from Sierra Leone.

Pinckneya pubens, is Georgia bark.

Morinda Royoc, Guettarda coccinea, G. ——— Antirhea, Macrocnemum corymbosum, are febrifuge.

Nauclea gamber, light brown and very astringent extract (sometimes substituted for kino,) is obtained at Malacca by boiling the leaves.

Uebersa tetrandra, is used in India (decoction of leaves) as an antetnuotic antidyenteric. Ainslie.

Cephaelis, emetica, Cephaelis ipecacuanha, Calicoceca ipecacuanha, from the damp, shady forests of Brazil, contains emetica.

Richardsonia rosea, R. ——— scalva, Spermacoce ferruginea, L. ——— Poaya, of Brazil, emetic.

Allied to specacanha, is said to be the raiz preta, celebrated for curing dropsies, and venomous bites of serpents.

Psychotria emetica, P. ——— herbacea, substitutes for ipecacuanha.

P. ——— noxa ———, P. alicourea, Margraavii, called both erva de rata, are poisonous in Brazil.

Gardenia dumetorum, the powdered fruit is an emetic, an

infusion of the bark of the root is used in bowel affections as a nauseative. Ainslie. Roxburg says, the root bruised and thrown into ponds intoxicates fish, like *cocculus indicus*.

*Oldenlandia Umbellata*.—The leaves expectorant in India.

*Coffea arabica*, yields *caffein*, according to Turner, by its well known seeds, *caffein* is a peculiar chemical principle. Lindley remarks, that as the part of coffee which is roasted, is the albumen, or hard horny part of the seed—that probably all of the *cinchonacæ* or *stellatæ*, which have similar horny seeds, would serve as substitutes for coffee.

The fruit of some species of *Gardenia Genipa*, and of *Vangueria* (the *Voavanga* of Madagascar) are succulent and eatable. Lindley.

*Chephalanthus occidentalis* of the U. States is here, worth an inaugural dissertation.

There are 12 sub orders in this family.

1. *Anthropermæ*.
2. *Spermacocæ*.
3. *Psychotricæ*.
4. *Cephacudæ*.
5. *Coccocypselæ*.
6. *Cephallanthæ*.
7. *Hedyotidæ*.
8. *Manettia*.
9. *Cinchonæ*.
10. *Guettardæ*.
11. *Hametiæ*.
12. *Gardeniacæ*.

For a very full account of the *Cinchonas*, and different barks of commerce, of their character, and for a full account also of *Ipecacuana*, I refer you to my *Outlines*, in vol. 2, p. 94 to 106, and 188 to 194.

#### CUPULIFERÆ—The oak or acorn tribe.

Almost every were, only rare in Barbary, and Chili, and the northern parts of South America; none at Cape of Good Hope. The species which are found within the tropics, are chiefly Oaks. They are always in the high lands and never in the equatorial vallies.

Gallic acid and tannin in the oak.

*Quercus Suber*, the Cork-tree, the bark contains, accord-

ing to Turner, (700) a peculiar principle, which he has called Suberin, and an acid called suberic.

*Quercus Ægilops*, its acorns are imported from the Levant for dyers, under the name of *Velonia*

*Quercus infectoria*, (Olivier,) } produce galls.  
*Quercus cerris*, }

All species of Oak powerfully astringent; may be used externally, too harsh for internal exhibitions. The U. States are rich in the Oaks, and embroidery of sprigs of *Quercus Virens*, or Live Oak is the naval uniform.

*Fagus* the Beech-tree.

*Corylus avellana*, the Hazelnut-tree, are here.

### COMPOSITÆ.—The compound flower tribe.

There are 3 sub orders in this family.

1. *Corymbifæræ*.
2. *Cinarocephalæ*.
3. *Cichoracæ*.

Every where in the world.

1st. of the *Corymbifæræ*.

The bitterness of the *Compositæ* has a particular character in this sub order, by its union with a resinous principle, and according to Decandolle, (*Essai sur les Pproprietes*, p. 177,) the following have little of this resinous matter mixed with mucilage of a bitter and astringent character; hence they are tonic stomachic and febrifugal.

1. *Tussilago Farfara*.
2. *Anthemis nobilis*.
3. *Inula Helenum*.
4. *Solidago*, different species.
5. *Eupatorium perfoliatum* and other species.

The French prepare the *Vin d'Aulnée* from the root of 3, which is heavily aromatic, perhaps slightly fetid as has been observed.

In proportion as the resinous principle is augmented the stimulating property is increased, as in the reputed anthelmintics.

*Tanacetum Vulgare*.

*Artemesia Abrotanum*.

*Artemesia Santonica*.

*Artemesia Absinthium*.

*Artemesia Maritimum*.

*Artemesia Vulgaris*, &c. &c.

*Veronica Anthelminticus*, of India, and *Santolina*, and in the reputed emmenagogues.

*Matricaria*

*Achillea Millefolium*

And some species of *Artemesia*.

*Moxa* is the product of *Artemesia Chinensis*, } both of China.  
*Artemesia Lanuginosa*, }

*Artemesia Maderaspatana* used in India. Stomachic—externally as anticeptic anodyne, Ainslie.

*Artemesia Indica*, antispasmodic, there.

*Calendula officinalis*, sudorific, also many species of *Eupatorium* and *Erigeron*, as

*Erigeron Philadelphicum*.

*Erigeron Heterophyllum*.

*Erigeron Canadense*.

*Erigeron Pulchellum*.

*Erigeron Bellidifolium*.

*Liatris*, several species are diuretic.

*Elephantopus scaber*—in decoction of the leaves and roots is given on the Malabar coast in dysuria, of course diuretic.

*Cacalia Suaveolens*, } U. States, properties unknown.  
*Cacalia Atriplicifolia*, }

*Cacalia Sonchifolia*, according to Ainslie, is antifebrile,

*Cacalia Alpina* and } are expectorant.  
*Cacalia Sarracenia*, }

The genus *conyza* of which we have species in the United States, will probably be found diuretic, like the *conyza*, esteemed so in Mendoza.

*Anthemis pyrethrum* is a sialogogue, the root.

*Segisbeckia orientalis*, is said to be so also.

*Anthemis cotula* is the stinking may-weed, or wild chamomile, is emetic.

*Mikania guaco* produces in South America, the *Vijuco del guaco*, esteemed as curative of the bites of serpents.

*Mikania scandens*, of the U. States, has not been tried medicinally.

*Eupatorium ayapana*, makes a diet drink by the leaves.

D. Hancock, in the *Quarterly Journal*, July 1831, p. 334, denies the curative power of *mikania*, and says the true *guaco* antidote is a species of *aristolochia*.

*Artemesia dracunculus*, tarragon is used from its agreeable flavour in French and Spanish cookery.

*Alchillea nana*, as well as several alpine dwarfs of the genus *artemesia*, yield in the Alps a vinegar, resembling in flavour the taragon.

*Helianthus annuus*, yields a fine oil from the seeds. John says its pith is a peculiar principle, and he calls it Medlin.

*H. tuberosus* is Jerusalem artichoke, is esculent while the roots of all the beautiful dahlias are disagreeable. M. Payen says that berzoic acid exists in the dahlias, (Brewster, 1. 376.)

*Elecampane*, yields Iunlin.

SECOND SUB-ORDER, *Cinarocephalæ*, intense bitterness, owing to a mixture of extractive with a gum which is sometimes abundant, as in *carduus benedictus*, c. — *marianus*, *centaurea calcitrapa*, c. — *americana*, *arctium barbana*, *cynara scolymus*, esculent and aperient.

The gum of the root of this *cynara*, the Arabians use as an emetic, calling it *kirnkuzeed*.

*Echinops strigosus*, the flowers in Spain are used for tinder.

The corollas of the artichoke, the cardoon, and several thistles, have the power of curdling milk, and in the south of Europe, are used for this purpose.

*Carthamus tinctorius*, is the bastard saffron.

THIRD SUB-ORDER, *Cichoraceæ*, there are the endive, the succory, and the lettuce, as principle.

*Cichorium intybus*, yields the succory coffee.

*C. endivia*, the common winter sallad, or *edivia*.

*Lactuca sativa*, the lettuce.

*L. virosa*, the narcotic lettuce.

The *scorzonera*, and the *tragopagon porrifolium*, or *salsafy*, are esculent vegetables.

The bitter narcotic secretion of most of the plants of this sub-order will be found in *sonchus floridanus*, *lactuca elongata*, and others of this country.

## CONVOLVULACEÆ.

## THE BIND-WEED TRIBE.

Abundant in the Tropics—scarce in cold climates. They twine around other plants, or creep among weeds on the seashore.

## A STIMULANT CATHARTIC PRINCIPLE.

1. *Convolvulus Scammonia*, the concrete juice.
  2. *C. Jalappa*, the root.
  3. *C. panduratus*, the root, not so active as Jalap, acts like Rhubarb.
  4. *C. Turpethum*, the root, harsher than Jalap.
  5. *C. Cneorum*,  
    *Cneorum album*, } do. purgative.
  6. *C. minimus*,  
    *c. Cantabriga*, } herb, vermifuge.
  7. *C. Mechoacanus*, } root, not so active nor so fa-  
    *Mechoacana alba*, } tiguing as Jalap.
  8. *C. soldanella*,  
    *Brasica marina*, } root, hydragogue cathartic.
  10. *C. floridus*, root, errhine.
  11. *C. sepium*, }
  12. *C. arvensis*, } juice, purgative.
  13. *C. Brasiliensis*, root, in decoction, purgative; yields a kind of scammony.
  14. *C. scoparius*, the wood yields oil of Rhodium, errhine.
  15. *C. Papirin*, root, drastic cathartic.
  16. *C. tuberosus*, root, cathartic.
  17. *C. macrorrhizos*, }
  18. *C. macrocarpus*, } roots, purgative.
  19. *C. maritimus*, }
- Ipomea Quamoclit*, the root errhine.
- Convolvulus Batatas*, }  
    *C. edulis*, } the roots of both are esculent.

*Cuscuta Americana*, } active, perhaps purgative.  
*C. Europea*, }

Mr. Hume, chemist in Long Acre, obtained by an operose process, a substance from Jalap which he considers the active principle of that root, and called it Jalapine. Five grains are obtained from one ounce of the root; it has neither taste nor odour; insoluble in ether, and scarcely in either cold or hot water. Pelletier experimented with the sulphate of Jalapine, sent to him by Mr. Hume, the result of which renders it doubtful whether Jalapine be the active principle of Jalap root. No therapeutical trials have yet been made with it.

## CAPRIFOLIACEÆ.

### THE HONEY SUCKLE TRIBE.

There are four sub-orders of this family.

1. *Lonicereæ*, the honey-suckle group, all *Loniceras*, &c.
2. *Sambucineæ*; the elder group; all *Sambuci* and *Viburnums*.
3. *Hederaceæ*; the ivy group; *Hedera* and *Cornus*, &c.
4. *Hydrangeæ*; the *Hydrangia* group; *Hydrangia*, and *Adamia*, &c.

Northern parts of Europe, Asia, and America, passing down within the limits of the tropics. Few in Africa; scarce in the southern hemisphere. All fragrant. Bark mostly astringent. Several possess other medicinal properties.

*Cornus Florida*, yields *Cornia*, tonic.

*C. sericea*, }  
*C. circinata*, } tonic.  
*C. mascula*, }

*Sambucus nigra*, }  
*S. Canadensis*, } The flowers fragrant and sudorific; the leaves fetid, and emetic and drastic purgative. Of the *Lonicera* or honey suckle, the same may be said; and also of the fruit of Ivy.

*Viburnum tinus*, } The fruit astringent but looses it after  
*V. acerifolium*, } fermentation.

*Hedera helix*. [*Hedera* is placed by Decandolle in the  
*Araliaceæ*.]

*Triosteum perfoliatum*; root a mild cathartic.

## DIPTEROCARPEÆ.

### THE CAMPHOR TREE TRIBE.

Only in the Eastern Islands of the Indian Archipelago—  
 largest of the Forest trees there.

*Dryobalanops Camphora*—the Camphor tree of Sumatra—  
 the substance is found in the heart of the tree in a concrete  
 state—less volatile than common Camphor of Commerce.

*Shorea robusta* yields a balsamic resin used in the temples  
 of India.

*Vateria Indica*—the Piney tree; the fruit is boiled to obtain a  
 tallow which rises to the top of the water and cakes when  
 cool—whitish—greasy to the feel—not disagreeable odour—  
 tenacious and solid, melting at the temperature of  $97\frac{1}{2}^{\circ}$  of  
 fahrenheit (Brewster 4, 186.)

For Camphor see also family *Laurinææ*.

## DIOSMEÆ.

### THE BUCKU TRIBE.

South of Europe—Cape of Good Hope—New Holland  
 Equinoctial regions of America.

Bucku plants of the Cape have a powerful and fetid odour  
 —antispasmodic, febrifuge in Cuspare bark, and *Evodia*, and  
*Ticorea* barks of Brazil.

*Dictamus Fraxinella* so full of a volatile oil that the sur-  
 rounding atmosphere in hot weather is inflammable.

*Evodia Febrifuga*—a Quina of Brazil.

*Casca de larangueira da terra* of Brazil miners, contains *Cinchonia*, (Dr. Gomez,) probably an *Evodia*?

*Ticorea jasminiflora*—used for Frambesia.

*Ticorea febrifuga*—in intermittents.

*Hortia Brasiliana*, similar properties—but weaker.

*Bonplandia trifoliata*  
*Cusparia febrifuga*

} is *Cusparia* Bark or *Augustura*, or *Augustura* Bark, or *Quina de la Guayana*—used by the Catalan capuchin Friars of the missions on the river Carony in South Am. (Humboldt.)

## EUPHORBIACEÆ.

*There are 16 species in the 208*

### THE SPURGE TRIBE.

1500 species in this family;  $\frac{1}{3}$ ths of which in equinoctial America—sometimes large trees—sometimes shrubs—often diminutive weeds—sometimes succulent aphyllous plants looking like the cacti or indian fig plants—or prickly pear plants.

50 species are in North America—a small number of which in Canada,  $\frac{1}{2}$  found in tropical Africa including the islands.  $\frac{1}{2}$  in tropical India. Many in Cape of Good Hope, where they are of succulent habit. 120 species in Europe—16 in Great Britain—7 in Sweden—and a few in U. States.

A milky secretion common to all of the family, varying in quantity—those having the most abundant quantity are the most active. It is excitant, in a few plants; aromatic, often strong—where nauseous, is acrid and pungent. The hairs of some species sting.

*Cascarilla* (*Croton*) is aromatic.

*Caturus spiciflorus*, tonic.

*Mercurialis annua*—the leaves diuretic.

*Ricinus communiss*, the root, diuretic.

*Phyllanthus*, several species diuretic and emmenagogue.

*Croton tiglium*, the wood

*Buxus sempervirens*, the leaves } antisphyllitic.

*Cicca disticha*, sudorific.

*Mercurialis perennis*—its juice emetic,

*Croton tiglium*  
*Ricinus communis* } the seeds Carthartic.

Many species of this family dangerous even in small doses.

*Euphorbia Ipcacuanha*,  
*E. corollata*,  
*E. hypericifolia*, &c. } U. States, medicinal.

*Iatropa Manihot*, yields a poison and tapioca; the albumen of the seeds is harmless but the embryo deleterious.

*Caoutchouc* pervades this family and also the *Artocarpeæ*.

*Turnsol* is also yielded by this family—is chiefly obtained from

*Crozophora tinctoria*; *croton tinctoria*.

*Acalypha Cupamenti* of India—root a cathartic.

*A. Caroliniana* } are native of the U. States—probably  
*A.* } medicinal.

*Aleurites ambinux*, is esculent, (the fruit,) another species has intoxicating nuts.

*Briedelia spinosa*, a shrub of India, astringent.

*Buxus sempervirens*—the leaves kill the Camels in Persia.

*Cicca disticha*,  
*C. racemosa*, } the fruit cooling and sub-acid.

*Cluytia collina*—the Capsules are poisonous. (Roxburg.)

*Codizum variegatum* the root and bark acrid—the leaves sweet and cooling.

*Commia Cochin chinensis*, white juice, emetic.

*Croton Eleuteria* of Swartz, is the *Quina Blanca* of Vera Cruz, and probably the *Cascarilla* of commerce?

*Croton tiglium* yields *Grana molucca*, emenagogue. Ainslie: Drastic cathartic—dangerous.

*C. perdicipes* is the *Pe de Perdiz*, of one province, the *Alcamphora* of other provinces, and *Cocallero* of others in Brazil: used in siphylis.

*C. campestris*, the root called *Velama do Campo*—purgative antisiphylitic there.

*C. gratissimum*—of Burchell has fragrant leaves, used by the Koras of the Cape of Good Hope as a perfume.

*Elæococca*, two species yield oil for burning and painting.

*Euphorbia Gerardiana* of Europe pukers in 20 grains of the root.

*E. Antiquorum*, } Produce the ancient *Euphorbium*; mixed  
*E. Canariensis*, } with the Bene oil in India it is exter-  
 nally used in rheumatism, and internal-  
 ly in constipation.

*E. Papillosa*, purgative, (Brazil.)

*E. Neriifolia*, the juice of the leaves purgative, mixed with margoza oil externally in contractions from rheumatism.

*E. Thymifolia*, (India) in bowel diseases of children, and for worms.

*E. Pilulifera*, India, fresh juice in apthous affections.

*E. Tirucalli*—India—fresh juice vesicant.

*E. heptagona*—Virey says the Ethiopians make a mortal poison from its juice for arrows.

*Excoecaria Agallocha*—India, according to Rumphius the juice poisonous externally to eyes—also the smoke of the burned wood.

*Hippomane Mancinella*—said to have killed persons who have slept under it. Its poisonous principle is volatile.

*Hura crepitans*, India, resembles *Excoecaria*.

*Hyænanche globosa*, used at Cape of Good Hope to poison Hyenas.

*Iatropa glauca*, India, the seeds yield an oil used by Hindoos in paralysis and chronic rheumatism—externally. Ainslie.

*I. Curcas*—the seeds purgative and occasionally emetic—yield an expressed oil externally useful in herpetic affections and itch; diluted, in Chronic rheumatism. The Chinese black-japaned boxes are varnished with this oil boiled with oxide of iron.

*Maprounea Brasiliensis*, the *Marmeleiro do Campo* of Brazil, the leaves yield a fugitive black dye. The root in decoction medicinal, used in stomach complaints. M. Auguste St. Hillaire says the *Moprounea* has no white juice.

*Pedilanthus Tithymaloides*, } called *Ipecacuanha*, Jew bush  
*P. Padifolius*, } or milk weed. Used in West  
 Indies. The first emetic, the  
 second antisphyliotic and  
 emmenagogue.

*Phyllanthus Niruri*, the young shoots in India diuretic; the leaves bitter, Ainslie.

**P. Emblica**, the fruit when fresh made into pickles—dry is acid and astringent.

**Sapium aucuparium**, the juice poisonous; the fumes have poisoned.

**Tragia involucrata**, the root esteemed by Hindoo doctors, antisypilitic. Ainslie.

The celebrated Teak, of which vessels are built in India, belongs to this family.

## ERICEÆ.

### THE HEATH TRIBE.

Cape of Good Hope very abundant. Europe, North and South America within and without the tropics—sparingly in Asia and India. Astringent and diuretic.

**Andromeda Mariana**—U. States; medicinal.

**A. ovalifolia**, poisonous to goats in Nipal.

<b>Epigæa repens</b> U. States,	}	U. States, poisonous.
<b>Kalmia latifolia</b> ,		
<b>K.       augustifolia</b> ,		
<b>K.       glaucæ</b> ,		

<b>Rhododendron ponticum</b> ,	}	poisonous.
<b>R.       maximum</b> U. States,		

**Ledum palustre** renders beer heady.

**Arbutus Uva Ursi** diuretic anti-dysuric used according to Bigelow, in gonorrhœa of long standing.

**A. Unedo**—the fruit yields in Corsica a pleasant wine and yet if it be eaten in large quantities produces narcotic effects.

<b>Gaultheria procumbens</b> U. States,	}	have fleshy fruit, esculent.
<b>G.       Shallon</b> .		
<b>Arctostaphylos alpina</b> , and <b>A. uva ursi</b> ,		
<b>Brossæa coccinea</b> ,		

The first named is anodyne in leaves, see my Veg. Matc. Med. U. S.

**Arctostaphylos Alpina**—diuretic, Decandolle remarks that this has been confounded with **vaccinium Vitis Idæa**: chemical-ly he says, are very different;

The Azaleas, a beautiful group of American and exotic plants are here. Are good subjects for an inaugural dissertation.

## GUTTIFERÆ.

### THE MANGOSTEEN TRIBE.

The tropics; South America; Madagascar, require heat and humidity; none in continent of Africa.

Yields a viscid yellow acrid purgative gum resinous juice resembling Gamboge. This last may be set down as the type of product of the proper juice.

*Stalagmitis Gambogioides*—yields Gamboge.

*Garcinia celebica*,  
*Gambogia gutta*, } a kind of gamboge.

Dr. Hamilton thinks there is no reason for supposing Gamboge to be produced by *Garcinia Gambogia*.

The juice of *Mamea* in the West Indies destroys chiggers—the bark of many kinds is astringent.

*Garcinia Mangostena*—its berry is said to be the most grateful of all known fruits.

*Pentadesma butyracea*—the butter and tallow tree of Sierra Leone—yields a greasy yellow juice.

*Calophyllum*.

## GENTIANÆÆ.

### THE GENTIAN TRIBE.

Herbaceous plants.

All over the world, from perpetual snow of European Mountains to the hottest regions of S. America.

Intense Bitterness in stems and roots universally characteristic—often the leaves are very bitter.

*Gentiana lutea*, used in England and France.

G.     *rubra*,         in Germany.

G.     *purpurea*   in Norway.

G.     *Amarella*,

G.     *campestris*,

G.     *cruciata*,

G.     *Peruviana* called Cachen in Peru.

G.     *Chiryita*, stomachic famous in East Indies.

*Coutoubea alba*,

*Coutoubea purpurea*,

*Clora perfoliata*,

The above are enumerated by Decandolle.

G. *crinita*,

G. *ochroleuca*,

G. *saponaria*,

G. *crinita*,

G. *Catesbœi*,

} U. States Gentians.

*G. lutea* contains a good deal of sugar, (Lindley,) hence made into Brandy in some parts of Switzerland.

*Villarsia nymphœides*.

*Menyanthes trifoliata*.

*Sabbatia angularis*, } and other species in the U. States are  
*Chronia angularis*, } bitter.

*Chironia centaurium*—bitter.

*Frasera Walteri*, U. States, a good bitter.

*Lisianthus pendulus*, in Brazil, the roots, febrifuge, bitter.

*Tachia Guianensis*. According to Von Martius there exudes from the axills of the leaves, little pellucid drops of yellow resin. The root is a febrifuge bitter. The U. States species of Gentain are worth, an inaugural dissertation.

## GERANIACEÆ.

### THE GERANIUM TRIBE.

Cape of Good Hope many. Europe, North America, Northern Asia and South America, few. Holland one genus.

An astringent principle, and an aromatic resinous flavour generally agreeable, pervade the family.

*Geranium maculatum*, U. States, astringent.

*G. robertianum*, in nephritic affections.

*G. carolinianum*, } U. States, worth investigation.  
G.

*G. spinosa*, burns like a torch, and gives out an agreeable odour. Lindley.

## JUGLANDEÆ.

### THE WALNUT TREE TRIBE.

Chiefly in North America—one in West Indies and Persia—one in Caucasus.

Yields by kernels a drying oil; and by extract of one species, a cathartic principle.

*Juglans cinerea*, bark of the root, extract of it.

## LOBELIACEÆ.

### THE LOBELIA TRIBE.

West Indies, Brazil, Sandwich Islands, Cape of Good Hope, New Holland, Chili.

Milky plants for the most part; of suspicious character; often dangerous.

*Lobelia syphilitica*, diuretic,

L. *cardinalis*, acrid, not clearly ascertained, } U. States.  
L. *inflata*, poisonous, emetic.

L. *tupa*, Chili, poisonous.

L. *longiflora*, West Indies, poisonous, called *Rebenta Cavallos*. Internally acts by violent purging, which is unrepresable till death ensues.

## LAURINEÆ.

## THE CINNAMON TRIBE.

Tropics of either hemisphere—a few straggling to North America and Europe; (none in Africa except the *Cassytha*.) Teneriffe and Madeira, Madagascar, Isles of France and Bourbon. (Brown Congo, 464.)

- Laurus cinnamomum*, cinnamon, } genuine.  
*L. cassia*, cassia, }  
*L. culilaban*, } substituted for the above.  
*L. Malabathrum*, }  
*L. cupularis*, cinnamon of Isle of France.  
*L. Quixos*, that of Peru.  
*L. cinnamomoides*, that of Santa Fe. (Humboldt) Chin. For. 27, Eng. ed.  
*L. Pucheri*, the fruit is the sassafras nuts of London. Ibid.  
*L. camphora*, yields much of the camphor of commerce.  
*L. Benzoin*, spice bush of United States.  
*L. cinnamomum*, also yields camphor.  
*L.* a species in Sumatra, called by Dr. Jack Parthenoxylon, resembles sassafras, and yields an oil useful in rheumatism.  
*L. sassafras* U. States yields a species of camphor.  
*L. parvifolia*, }  
*L. globosa*, } contain an acrid red or violet juice, like that  
*L. foetens*, } in Mysisticeæ.  
*L. caustica*, }

The family contains a volatile oil. Also a fixed oil which is supposed to constitute a chief part of the Avocado Pear of West Indies. (*Persea gratissima*.)

The same oil is in the greasy exudation of the fruit of *Litsea sebifera*.

This family may be called truly a camphoraceous one, yet all of the camphor of commerce is not produced by it. A very distinct kind from the common drug, is the product of the *Dipterocarpeæ*, (which see.)

This kind is pulverizable without the addition of alcohol,

and when pulverised does not become agglutinated into masses like that produced by the Laurineæ. There is a great difference, too, in its appearance, from common camphor. It is opaque, of a chalk white hue, in tabular plates or flakes, in which state it is found in the centre of the body and in the large branches of the tree, by splitting it. Similar masses of turpentine are occasionally found in the coniferæ. The liquid camphor lately introduced into commerce under the name of the essential oil of camphor, is the product of the Dipterocarpeæ and not of the Laurineæ.

The Camphor of the Labiatæ does not appear to differ in effects externally applied from those following the similar use of the Camphor of commerce. Of the Labiatæ the sage, marjoram, and rosemary, are said to yield the most. I think this incorrect. According to Præust 100 per cent is obtained from the oil of rosemary, and Majoram, 12½ from oil of sage, 25 from Lavender. Camphor is yielded by the volatile oils of the Scitamineæ also, but neither from this family nor the Labiatæ is it procured for commerce. *Zedoary* Maranta galanga, *Kœmpferia rotunda*, and *Zingiber officinale* are instances in the Scitamineæ.

The essential oil of camphor, mentioned above as recently introduced into commerce, has been brought to this city by Dr. M. Burrough, a most indefatigable and enterprising traveller, and judicious collector. By the prompt liberality of the Secretary of the Navy, I was authorised, (on representing to the Department, that Dr. B. had brought a few bottles of this very costly medicine, reputed in the East efficacious in the treatment of Cholera,) to furnish to every naval station (together with an equal quantity of his Cajuput oil, of genuine quality) several ounces of it. This was accordingly done, and though fortunately the Cholera has not as yet afforded the Medical Officers of the Navy opportunity to attest its efficacy, it still is highly creditable to the Secretary of the Navy, that he met the suggestion promptly, for the possible contingency of such a disaster. I have however used among the naval officers and men, the medicine, in affections of the stomach and bowels, with great efficacy and satisfaction. I recommend it, from experience in several instances, for gouty disease of the stomach.

## LEGUMINOSÆ.

*The Pea Tribe.*

In every part of the world, except St. Helena and the island of Tristan d'Acugna.

The most extensive of all the families known—one of the most important to mankind as food, ornament, utility, and medicine.

The whole family wholesome, with a few singular exceptions.

*Lathyrus Aphaca*, the seeds noxious.

*Citissus Laburnum*, the seeds noxious, the leaves and branches of *Tephrosia* intoxicate fish.

*Ornithopus Scorpiodes*, vesicant, (leaves.)

*Coronilla varia*, poisonous.

*C. —emerus*, acts like *Senna*.

*Colutea arborescens*, the same.

*Cassia Acutifolia*—*C. Lanceolata*—(of Delile and Nectoux.)

*C. Senna*—*Cynanchum Arguel*—compose *Senna*.

*M. Delile* says the *C. Lanceolata* of Arabia does not yield *Senna*.

*C. Marilandica*, American *Senna*.

The active principle is Cathartine, *M. M. Lassaignes* and *Fenuelle* discovered it.

*Cassia Fistula*.

*Cathartocarpus Fistula*.

*Ceratonía Fistula*.

*Tamarindus Indica*.

} All purgative.

*Ceratonía Siliqua*.

*Mimosa Fagifolia*.

*Inga Fœculifera* of West Indies.

The last is called *Pois doux* in St. Domingo.

*Glycyrrhiza*, *Glabra*—liquorice.

*Abrus precatorius*—(*Ainslie*)—same properties.

*Genista*, *Phaseolus*, *Pisa*, *Ononis*, *Guitandina Nuga*, and *Moringa*, *Anthyllis Cretica*,

Roots of the above are diuretic.

*Dolichos tuberosus*, *bulbosus*, *Lathyrus tuberosus*.

The bean esculent.

*Cœsalpina Bonduccella*, *Æschynomene grandiflora*, *Geofrœa inermis* and other species, the barks bitter and tonic.

*Æschynomene hispida* of the United States is worth attention.

*Guilandica Bonducella*—the kernels are very bitter and tonic, (India.) When pounded small and mixed with oleum ricini, they are said by Ainslie to be an efficient external application in incipient hydrocele.

*Acacia Arabica*, the bark in India, powerfully tonic.

*Mimosa saponaria* has saponaceous qualities.

Decoction of the pods, used in washing as a substitute for soap.

### *Hedysarum Gyrans in India.*

Singular phenomena exhibited by its leaves. See Darwin's Bot. Garden.

*H. Sennoides*—the root tonic, and stimulant—in India. Many species of this genus in the United States require investigation; all beautiful plants; worth cultivation on this account. *Glycine Apios* is another.

*Algarobas*, or *Prosopises* of the Western part of South America, have the pericarp of the fruit consisting almost altogether of tannin. The genus *Acacia* contains it in the bark. Lindley says, In 1824 some tons of the extract of the *Acacia* Bark were imported into Britain, for the use of tanners, from New South Wales.

*Acacia Nilotica*, *Cassia Sabak*; the pods used in Nubia for tanning.

*Acacia Catechu*—yields Catechu, Terra Japonica. See my "Outlines," vol. 2, p. 10.

*Pterocarpus Erinacea*, G. Kino.

*P. Draco*, G. Dragon.

*P. Santalinus*, Sandal Wood.

*Erythrina Monosperma* Gum Lac.

*Hymenæa Courbaril*—Gum Anime.

*Acacia Vera*—Gum Arabic.

*A. Senegalensis*—Gum Senegal.

Lindley says *A. Senegalensis* yields Gum Arabic.

*Astragalus Creticus*, *A. Tragacantha*, both yield Gum Tragacanth, and of course Cerasin: other species of *Astragalus* yield it.

*Galega virginiana*, U. States should be examined.

Manna of Arabia, according to Mr. Don, is produced by several species of *Hedysarum*, allied to *H. Alhargi*.

*Dalbergia Monetaria* yields a resin similar to Dragons Blood, Ainslie.

*Butea Frondosa*, B. — *Superba*, both yield a similar resin. Woods of this family important.

*Robinia pseudo-acacia*—Locust.

*Mimosa* (a species of it) *Jacaranda* or Rose Wood.

*Coesalpina Brazilensis*, Brazil Wood.

*Hæmatoxylon Campechianum*, Logwood, yields Hematine.

*Phaseolus trilobus*—in India—Sem or Sembi—cooling sedative, antibilious tonic, used externally for weak eyes.

Trans. M. and P. Soc. Cal. 2—406.

Peas and Beans contain sulphur in various combinations, (hence the flatulency has the odour.)

Carbazotic acid produced by nitric acid poured on Indigo.

*Copifera officinalis* and fifteen other species all yield Balsam *Copaiva*.

*Copifera multijuga* yields the most.—Von Martius (Lin. Tran. 1826—p. 418,) called *Tacamahaca* in Venezuela.

*Myroxylon Peruiferum*—Quinquino of Peru—yields Balsam of Tolu.

Arch. Richard says both it and balsam of Tolu are yielded by *Myroxylon Toluiferum*.

*Clitoria Mariana*, U. States, ought to be examined.

*C. Ternatea*, the root is emetic.

*Acacia Scandens* of Java, emetic. (Horsfield.)

*Psoralea Corylifolia* in India tonic, and deobstruent.—Ainslie. We have species of this genus in the U. States worth attention.

*Baptisia Tinctoria*, *Sophora Tinctoria*, this is the wild Indigo of the U. States, see my Veg. Mat. of the U. States, roots and herbs, sub-astringent and antiseptic, cathartic and emetic also.

*Cassia Auriculata* in India, medicinal refrigerant. &c.—Ainslie.

*Coronilla Picta*, the leaves used as a poultice to hasten suppuration in India.—Ainslie.

*Parkia Africana*, the seeds roasted, fermented, partially putrid, washed, pounded, make a kind of Chocolate and sauce for meats. The farinaceous matter surrounding the seeds, forms a pleasant drink, and is also made into a sweet meat.—Ainslie.

*Dolichos Pruriens*—set down as mechanical anthelmintic; the seeds are eaten in some countries. Strong infusion of the root used in Cholera Morbus in India.—Ainslie.

*Bankinia tomentosa*—the dried buds and young flowers used in India in Dysenteric affections.—Ainslie.

*Galega Purpurea* is Tephrosia. Used in India, also, in dysentery, in lientary and tympanitis.

*Indigofera*—yields Indigo.

*Indigofera Anil*—pounded leaf used in hepatitis.

*Coumarouma Odorata*—Tonka Bean contains a peculiar

odoriferous principle called Coumarin.—Turner says Vogel mistook it for Benzoic Acid, which it is not.

*Gleditsia Triacanthos*—Locust.

## LINEÆ.

### *The Flax Tribe.*

Europe and northern Africa, N. and S. America, 2 in India and 1 in New Zealand.

Remarkable for their tenacious stringy fibres and mucilaginous and oily seeds; generally diuretic.

*Linum Usitatissimum*.

*L. Catharticum*, a purge.

*L. Virginianum*, U. States.

## LABIATÆ.

### *The Mint Tribe.*

In temperate regions, in hot, dry, exposed situations, hedge-rows, meadows, wood-sides, and groves.

Tonic Cordial, Aromatic, Stomachic properties, owing to a bitter principle and a volatile oil; not one single poisonous, suspicious, or even unwholesome individual in the family.

*Lavandula Officinalis*.

*Origanum Marjorana*.

*O. Vulgaris*.

*Salvia Sclarea*.

*L. Officinalis*.

*S. Lyrata*—U. States. Medicinal?

*Hedeoma pulegioides*.

*Stachys Palustris*, the roots esculent.—(Mr. Joseph Houlton.)

*Lamium Amplexicaule*.

*Thymus Serpyllum*.

*Stachys Lanata*, *Ballota Lanata*.

*Mentha viridis*, *M. piperita*, *M. Borealis*—U. States, and other species, perhaps all.

*Ocimum basilicum*.

*O. febrifuga*, Sierra Leone, febrifuge.

*O. Album*—India, juice in infantile catarrh.

*Glechoma hederacea*.

*Rosmarinus officinalis*.

*Lavandula Carnosa*, called *Anisochillis*, the fresh juice mixed with pounded sugar, in Cynache, India.

*Origanum Dictamnus*—tonic and stimulant.

*Phlomis esculenta*—Bengal.

*Cunila mariana*.

Whole tribe contains camphor—in the oils of Sage and Lavender it may be abundantly separated.

## MAGNOLIACEÆ.

### The Magnolia Tribe.

A North American family—a few in the West Indies, India, China, and Japan.

Bitter tonic—flowers fragrant. Destitute of Aroma.

*Magnolia tripetala*, *M. Glauca*, *M. Cordata*, *M. grandiflora*, *M. auriculata*, U. States.

*M. Excelsa*, yields Champ, a fine, greenish yellow timber, India.

*M. Yulan*, in China, febrifuge, (the seeds.) Tsin-y.

*Liriodendron Tulipifera*.

## MELIACEÆ.

### The Bead-Tree Tribe.

East and West Indies, Africa, and South America, Syria.

Aromatic, tonic, stimulant, and astringent principle.

*Canella alba*, false winter's Bark, used in West Indies as a condiment.

*Guarea Trichilioides*, purgative and emetic. (Aublet.)

*Melia Azedarach*—*Melia Azedaracta*, Neemtrees of India, Margosa tree, bitter, nauseous, anthelmintic. The pulp surrounding the seeds is supposed to be deleterious. Turpin says they do not poison dogs, and children eat them. I have heard of three deaths from their exhibition for worms in Delaware.\* By distillation the root yields an inflammable gas fit for burning.

*Trichilia Speciosa*—yields in India a warm Oil of agreeable odour; used externally in paralysis and in chronic rheumatism.—Ainslie.

*Swietenia Mahagoni*. S. Febrifuga.

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\*From a newspaper publication.

## MYRTACEÆ.

*The Myrtle Tribe.*

Hot countries, within and without the tropics, New Holland, South Sea Islands, East and West Indies. (South of Europe the common Myrtle.)

Fragrant aromatic pungent volatile oil in the whole family.

*Caryophyllus aromaticus*.—(English cloves.)

*Calypthranthes Aromatica*—the young flower buds like cloves.

*Melaleuca Leucadendron*. *M. Minor*—Cajuput Oil.

*Eugenia Racemosa* (Stravadium) bark similar to cinchona. Here are the Rose Apple, Guava Fruit, Jamrosade, Jabotica-beiras—in Brazil a fine fruit.

*Eucalyptus Resinifera*—yields a kind of gum Kino. Other species yield large quantities of tannin.

*Punica granatum* is here—bark of the root used for the tape worm, rind of the fruit astringent.

*Glaphyria nitida*, is called by the Malays, Kayo Umur Panjang, or tree of long Life—the leaves yield at Bencoolen a substitute for tea, called by the natives tea plant.

## MALVACEÆ.

*The Malva Tribe.*

Tropics and hot parts of temperate regions.

*Sida Cordifolia*, mixed with rice in bloody flux.

*S. Carpinifolia*, in Brazil, the chewed leaves for wasp bites.

*S. Mauritiana*, emollient fomentations by Hindoo Doctors.

*Abutilon esculentum*, Benseao de Deos—the flowers a vegetable in Brazil.

*Sphærolea Cisplatina*, a decoction in Brazil in bowel diseases.

*Pavonia Diuretica*, same country, diuretic demulcrent.

*Malva Crispa*, for wasp bites, (Cavanilles.)

*Hibiscus Esculentus* Okra, Gumbo.

*Althæa Officinalis*, Marshmallows; the root contains a peculiar principle called *Althein*, doubtful.

*Malva Alcea*, petals astringent.

*Hibiscus Rosa Sinensis*, Chinese eye brow blacking, and leather for shoes.

## MYRICEÆ.

*The Gale Tree Tribe.*

Cold parts of Europe and N. America, tropic of S. America New Holland, Cape of Good Hope.

**Aromatic Shrubs, some large. Astringent, tonic properties.**

*Comptonia Asplenifolia.*

*Myrica Cerifera* and other species.

*M. Sapida*, size of a cherry, has a pleasant acid and is esculent at Nipal, (Don. p. 56,) the *U. Species* of *Myrica* would prove a good subject for an inaugural dissertation.

## MYRISTICÆÆ.

### The Nutmeg Tribe.

**Tropics of India and America, exclusively.** Bark has a red-dish acrid juice which stains red; rind of the fruit very acerb a caustic—the albumen is the nutmeg—the arillus the mace—both contain a fixed fatty oil.

*Virola Sebifera*—contains a great quantity of the fatty oil, which may be extracted by putting the seeds into hot water.

*Myristica Moschata*, common East India nutmeg.

*M. Otoa*, Nutmeg of Sante Fe-

## MONIMIEÆ.

### South America.

**All parts of the bark and leaves exhale a myrtle or laurel odour.**

**Ex.**—*Dorstenia Contrajerva.*

## MENISPERMEÆ,

### The Cocculus Tribe—or Moon-seed Tribe.

**Trops of America, not one hundred species in the whole.**

*M. Cocculus*—*Cocculus indicus*—poisons fishes.

*M. Palmatun*—Colombo root.

*M. Gulancha*—Bengal—used by native India practitioners in various febrile and debile affections.

*M. edule* of Lamart—according to Decandole, eaten in Egypt.

*Cocculus Plataphyla*—By Brazilians, in intermittent fever and Liver complaint.

*C. Suberosus*—yields *Picrotoxin*.

*C. Cinerescens*—pure bitter and tonic.

*Cissampelos ebractata*—*E. Ovalifolia*—for bite of serpents.

C. ——— *pareira*, *Arbuta Amara*, called *Pareira brava*—diuretic.

*Orelha de Onca* of Brazil, bitter, in intermittents.

A. *Candicans* of Cayenne—Leaves are intensely bitter.

## NELUMBONEÆ.

### Egyptian Bean Tribe.

Still waters in the temperate and tropical regions of northern hemisphere, in new and old world—very abundant in East Indies.

*Cyamus nelumbo*, } U. States.

*Nymphæ nelumbo*, }

*Lyamus speciosum*, India.

Not eatable in India; the creeping stem, or root, is eaten in China as food.

The American plant differs in colour from the India, and is on many accounts deserving of an inaugural dissertation.

## OLEACEÆ.

### The Olive Tribe.

Temperate latitudes inclining towards the tropics, but scarcely known beyond 65° N. latitude. The genus common in N. America—two genera are European and Eastern plants. A few in new Holland and elsewhere within the tropics. One Ash, is in Nipal.

The family remarkable for yielding the only instance of the pericarp containing a fixed oil—most other plants contain it in the seeds, when it exists in them at all; yields *mannite*.

F. *Ornus*—*Mannite* differs from sugar by not fermenting with water and yeast.

The bark of olive and ash febrifuge bitter and astringent.

*Fraxinus rotundifolia* yields Manna.

*Farnus*.

*Olea Europea*; Olive;

Gum *Olea Europea*, contains a peculiar substance, called *Olivile*.

*Ligustrum Vulgare*, Privet;

*Chimonanthes Virginica*, Fringe Tree;

*Olea Americana*. Olive U. States.

## OXALIDEÆ.

*The Wood-Sorrel Tribe.*

North America, Cape of Good Hope, rarely in East Indies and equinoctial Africa.

Acid foliage, the acid oxalic; some are astringent and used in hæmoptisis.

*Oxalis corniculata*.

O. \_\_\_\_\_ }  
O. \_\_\_\_\_ } United States.  
O. \_\_\_\_\_ }

In Brazil, several species are used in malignant fevers.

"The fruit of *Averrhoa* is intensely acid."—*Lindley*.

*Araccacha* in Columbia, is a species of *oxalis*, bears tuberous roots.

## PODOPHYLLÆ.

*The May-Apple Tribe.*

The marshes of North America.

Purgative.

*Podophyllum peltatum*.

*Jeffersonia diphylla* of Barton. [See my *Veg. Mat. Medica*  
United States, vol. 2.]

## PHYTOLACCEÆ.

*The Poke Tribe.*

Africa, India, North America, within and without the tropics.

The effects somewhat resemble *guaiacum*.

*Phytolacca decandra*.

Powerful purgative, the plant; pulverized root, emetic;  
old leaves, acrid; young shoots, esculent.

## PAPAVERACEÆ.

*The Poppy Tribe.*

Principally Europe, Siberia, Japan, New Holland. Tropical America contains a very few. In North America beyond

the tropic, several. The most are annual plants. The perennial species are in mountainous tracts of country.

Properties well known from opium, the type of the family. Narcotic. The oil of the seeds esculent.

*Sanguinaria Canadensis*, emetic, like *sulp. cupri*.

*Argemone Mexicana*

*Cardo Santo of the Brazilians* } Emetic, (the seeds) used in Brazil  
as antidote for venomous bites.

Meconic acid and } Produced by the  
*Morphia*,

*Papaver somniferum*, &c.

*Chelidonium majus*, its juice medicinal.

## POMACEÆ.

### *The Apple Tribe.*

Almost every where; rare in Mexico; unknown in Africa, except on its northern shore. Not found in the southern hemisphere. One species in the Sandwich Islands.

Properties well known.

Malic acid the base.

*Photinea dubia*; the bark dyes scarlet.

*Pyrus cydonia*; the seeds mucilaginous.

*P. Acuparia*.

*Crætegus* is here.

## POLYGALEÆ.

### *The Milk-wort Tribe.*

Most of the genera are limited to one or two of the five parts of the globe. *Polygala* is in all the five parts. Situation, wet or dry, high or low, is indifferent to this genus.

Bitterness in the leaves; milky juice in the roots.

*Polygala senega*; diuretic, stimulant, sialogogue, diaphoretic, sudorific, emmenagogue.

*P. Sanguinaria*, similar; peculiar principle called *Senegin* has been discovered by Gehlen in the root of *Polygala senega*.

M. Reschier has procured a principle he has called *Polygaline*, from the same plant; not known whether these two be identical.

*Monina polystachya*; Yallhoy of Peru, the bark used in dysentery.

*Krameria triandra*; tonic and astringent; the root contains gallic acid, but no tannin nor resin.—*M. Cadet*.

*P. Ixina* probably yields the same.

## POLYGONEÆ.

### *The Buck-wheat Tribe.*

Every part of the world.

Lindley remarks that sorrel on the one hand, and rhubarb on the other, may be taken as the representatives of this family as regards properties.

*Coccolobo uvifera* yields a kind of extract similar and it is said nearly equal, to Kino.

*Polygonum Hydropiper*, acrid.

The juice of Cataya, a species of polygonum, is used by the Brazilian Indians to purify and condense the juice of the sugar-cane. The infusion of the ashes is employed.

Rheumic acid is contained in the stem of rheum.

*Rumex acetosa* contains pure oxalic acid.

Rhubarbin is the active principle of the rhubarb.

*Rheum palmatum*.

*R. undulatum*.

*P. fagopyrum*; buckwheat.

*P. tartaricum*; used for food, (seed.)

*P. aviculare*; the seeds said to be emetic and purgative.

Meisner very properly doubts this.

*P. barbatum*; an Indian remedy for gripes in cholic.

*P. hispidum*; the leaves a succedaneum in South America for tobacco.—*Humboldt*.

## PIPERACEÆ.

### *The Pepper Tribe.*

Exclusively in the tropics.

Aromatic pungent healing properties; well known.

*Piper nigrum*; contains Piperina.

*P. longum*.

*P. Cubeba*; allays irritation in the mucous membrane of the urethra.

- P. Anisatum; smells of anise—a decoction used to wash ulcers.  
 P. Betel; } The Betel-nut tree of the Malays—acrid and  
 P. Siriboa; } stimulating mascatory.  
 P. inebrians; narcotic—used to prepare an inebriating beverage.

## PYROLACEÆ.

### *The Winter-Green Tribe.*

Europe, North America, and the Northern parts of Asia.

Diuretic and stimulant tonic properties.

Chimaphila umbellata.

C. maculata.

Pyrola rotundifolia.

P. chrysantha.

The genus monotropa is here.

The essential oil of winter-green is deleterious.

## RANUNCULACEÆ.

### *The Crow-foot Tribe.*

Europe more than one-fifth of the whole family; one-seventh in North America; one-twenty-fifth India; one-seventeenth in South America; few in Africa, except on the Mediterranean shores; New Holland 18 species. Delight in a cold damp climate, and if found in the Tropics, are on mountains—unknown in the lowlands of hot countries.—*Lindley.*

Acridity, causticity, of a volatile kind, and poison.

Whole family suspicious.

Knowltonia vesicatoria; the leaves blister. Southern Africa.

Ranunculus glacialis; sudorific.

Aconitum napellus; yields Aconite.

A ——— cammarum; diuretic.

Helleborus foetidus; anthelmintic.

H ——— niger; purgative emmenagogue.

Cimicifuga racemosa; United States. Purgative diaphoretic stimulant.

Hepatica triloba; has reputation, but I think undeservedly in consumption.

Delphinium consolida; larkspur.

D ——— stavisagria; yields Delphinia.

D ——— elatum; deleterious.

Adonis autumnalis; emmenagogue, Pallas. Bich, or Bish, an Aconitum of India, is a virulent poison. Dr. Hamilton refers it to Caltha.

Dr. Wallick considers the Bish, Vish, Visha or Alivisha, as the product of Aconitum ferox.

Caltha palustris; United States. Requires investigation.

Pæonia officinalis; the root is acrid and antispasmodic.

Ranunculus flammula;

R ——— sceleratus } United States.  
R ——— bulbosus }

Their action is quick { powerful epispastics, and violent,  
and the ulceration difficult to heal—used in the He-  
brides.

Clematis recta } The leaves used by Beggars, and also  
C ——— flammula } the 3 preceding, to create artificial  
ulcers.

Delphinia; first discovered by M. M. Lassaignes and Fenuelle, in union with oxalic acid.

Hydrastis Canadensis; United States, strong and sub-narcotic smelling, bitter-tonic.

Coptis trifolia } United States.  
Helleborus trifolius }

Pure and powerful bitter, used in apthæ of children, &c.  
Zanthorrhiza apiifolia; United States, the wood and bark pure bitter.

Nigella sativa; the seeds resemble pepper in effect.

Delphinium stavisagria; the seeds caustic and vermifuge.

Aquilegia Columbina; tonic.

A ——— Canadensis; United States, deserves investiga-  
tion.

Clematis Virginiana, is entitled to the notice of American physicians.

C. Viorna and other European species are well known.

## ROSACEÆ.

### The Rose Tribe.

East and West Indies and South America,—chiefly in the temperate or cold climates of the Northern Hemisphere.

None unwholesome; contains the astringent principle.

Tormentilla erecta.

Rubus fragaria,

- R " procumbens } The root medicinal: fruit esculent  
 R " trivialis } and good.  
 R " strigosus, }  
 R " villosus, } The root medicinal: fruit delicious.  
 Fragaria Vesca.  
 F " " U. States. } Fruit well known.

Agrimonia Eupatoria,

Brayera Anthelmintica, of Abyssinia, is said to be the most powerful anthelmintic in the world, on the authority of Dr. Brayer, after whom it is named. Two or three doses of the infusion are sufficient for the most obstinate cases of tœnia.

Rosa Canina—the fruit astringent in chronic diarrhœa and other diseases.

R " Damascena—the petals yield a fragrant essential oil called Attar of Roses.

R " Gallica—petals astringent when dried rapidly. Used in leucorrhœa, debility, diarrhœa, &c.

Geum ——— Bennet,

Potentilla; Cinquefoil are here.

Many species native of the United States.

Gillenia stipulacea—emetic.

G. trifoliata—emetic.

Spirœa tomentosa—Hardhack, and other species.

## RUTACEÆ.

### *The Rue Tribe.*

South of Europe—rarely within the tropics.

Powerful odour and bitterness, both peculiar, pervade them.

Ruta officinalis—said to be emmenagogue anthelmintic and sudorific.

## RHAMNEÆ.

### *The Buck-thorn Tribe.*

Every where except in the arctic zone.

The greatest number of species dispersed through the hottest parts of Europe, United States, North of Africa, Persia, and India in the Northern Hemisphere; in Cape of Good Hope and New Holland in the Southern. Ceanothus is confined to North America.

*Rhamnus catharticus*; purgative in dropsy; the berries yield a green yellow dye.

Several other species are purgative.

<i>Rhamnus infectorius</i>	} The fruit are the French berries of commerce, Graines d'Avignon, Fr.
<i>R. saxatilis</i>	
<i>R. Amygdalinus</i>	
<i>Ziziphus Jujube</i>	} The Jujube, made into a pectoral paste, much valued and agreeable.
<i>Z. Lotus</i>	
<i>Hovenia dulcis</i> , China.	

The peduncles become enlarged and succulent, and form an agreeable fruit, like a pear.

*Sageretia theezans*.

Used for tea by the poorer classes in China.

*Ceanothus Americanus* of the United States may be similarly used here.

*Zizyphus Jujuba*.

The bark, according to Rumphius, is employed in the Moluccas for diarrhoea.

## SCROPHULARINEÆ.

### *The Fig-wort Tribe.*

Three sub-orders in this family *Veroniceæ* 2. *Erinaceæ* 3. *Scrophularineæ*.

Abundant every where in the world, from the coldest regions to the hottest. In middle Europe they form one twenty-sixth of the flowering plants—in North America about one thirty-sixth, according to Lindley. In India, New Holland, South America; very common. Terra del Fuego contains them.

Acrid bitterish suspicious plants.

<i>Scrophularia nodosa</i>	} The roots purgative and emetic.
<i>S. aquatica</i>	
<i>Gratiola officinalis</i>	
<i>G. Peruviana</i>	
<i>Calceolaria</i>	
<i>Digitalis purpurea</i> .	

Dangerous, reduces the pulse, produces vertigo, dejection, increased saliva, urine, and death.

*Mimulus guttatus*.

The leaves esculent as a salad.

*Torenia Asiatica*.

The juice of the leaves considered on the Malabar coast a cure for gonorrhoea.—Ainslie.

*Scoparia dulcis*.

An infusion used by Indians of South America to cure agues.—*Humboldt*.

*Veronica Virginica*, United States, should be examined.

Vauquelin says the purgative property of *Gratiola officinalis* depends on a peculiar substance resembling resin, differing by being soluble in hot water.

*Antirrhinum Linaria* yields phosphorus.

<i>Chelone glabra</i>	} United States—should be investigated.
<i>Mimulus ringens</i>	
<i>M. alatus</i>	
<i>Scrophularias</i>	

## STELLATÆ.

### *The Madder Tribe.*

Northern parts of northern hemisphere.

Common weeds.

A colouring matter in the roots, and a diuretic property.

*Rubia tinctoria*.

*R. mangista*; Bengal madder.

*R. noxia*; poisonous.

*Gallium aparine*; diuretic.

*G. verum*; the flowers curdle milk.

Several United States species deserve to be investigated.

The grains of some species in Europe are torrified and used as coffee.

*Asperula odorata*; woodruff; fragrant when dried; diuretic.

*A. cynanchica*; somewhat astringent.

## SPIGELIACEÆ.

### *The Pink-root Tribe.*

Exclusively an American family; southern hemisphere within the tropics.

*Spigelia marilandica*; anthelinintic, sub-narcotic occasionally.

## SAXIFRAGÆÆ.

### *The Saxifrage Tribe.*

Herbaceous plants, with small white and yellow flowers.

Europe and in other parts of the globe. On mountainous places. On old walls. Rocks and rocky hills.

More or less astringent, (Decandolle.)

*Heuchera Americana*.

*Saxifraga granulata*; and several United States species.

*Parnassia palustris*; Europe and the United States.

## STYRACEÆ.

### *The Storax Tribe.*

North and South America, within and without the tropics; China and tropical Asia.

Yields benzoic acid and fragrant oleo-resinous secretion, called storax.

*Styrax officinalis* } Gum benzoin.  
*S. benzoin*, }

*Halesia tetraptera*; worth examination.

*Symplocus*; many of this genus yields a yellow dye.

*Alstonia theiformis*; leaves slightly astringent, used as tea.

## SIMARUBACEÆ.

### *The Quassia Tribe.*

Tropical America, India, and Africa; one plant in Nipal according to Lindley. Intensely bitter, without exception.

*Quassia simaruba*.

*Q. excelsa*.

*Simaruba versicolor* of St. Hillaire is called in Brazil, *Pariba*:

So intensely bitter that no insects assail it.

Brazilians use a tincture of it in brandy to destroy vermin, and as curative of venomous bites.

## SALICARIÆ.

### *The Loosestrife Tribe.*

Two sub-orders in this family by Decandolle.

1. *Salicariæ*.

2. *Lagerströmiæ*.

The first sub-order, Europe, North America, the tropics

of both hemispheres, one in New Holland; the second sub-order in South America and India. Astringent.

*Lythrum salicaria*.

*L. verticillata*, U. States.

*L. Europeum*.

*L. Hunteri*; in India the flowers are mixed with *Morinda* for dyeing, under the name of *Dhawry*.—*Hunter As. Res.* 4. 42.

*Heimia salicifolia*; violently diaphoretic and diuretic; flowers yellow; the family generally has blue or red flowers. By the Mexicans esteemed anti-siphylitic and called *Hanchinol*.

*Lawsonia inermis*; yields the Egyptian Henne; used by the women of Egypt to stain the fingers and feet pink; used in colouring morocco skins reddish yellow; does not contain tannin.

*Ammania vesicatoria*; the leaves are said to possess a strong muriatic smell; very acrid; used by native physicians in India to blister in rheumatism; vesicate in half an hour.—*Ainslie*.

The beautiful plant called in Pensacola and other parts of Florida Crape myrtle, is here *Lagerströmia*.

*Ammania humilis* and other United States' species of *Ammania* ought to be investigated.

## SALICINEÆ.

### The Willow Tribe.

Europe, Northern Asia, North America, scarce in Barbary, one in Senegal.

The willow, the poplar, and in Europe the sallow, are well known and valued for their peculiar wood; the bark is astringent of this family and of course tonic.

*Populus tremuloides*; febrifuge.

*Salix herbacea*; the leaves soaked in water, used in Iceland for tanning leather.

Sir Humphrey Davy found willow bark to contain as much tanning principle as oak bark.

The active principle is a vegeto-alkali, *Salicinia*, analogous to Quinia.

## SOLANEÆ

Herbaceous plants or shrubs, with alternate leaves. Flowers monopetalous; fruit succulent; seeds numerous. The geographical position is general, but especially within the tropics.

Yields three principles.

1. A narcotic principle.
2. An acrid principle.
3. A demulcent mucilaginous principle.

*Atropa* *Balladonna*

*Datura* *Stramonium*

*D.* *Tatula*, and other species

*Hyoscyamus*, *niger*

*Nicotiana* *Tabacum*

*Solanum* *nigrum*

*Solanum* *Dulcamara*

Examples of plants yielding the narcotic principle.

*Capisicum* *annuum*, and }  
other species of *capsicum* }

Example of the acrid principle.

*Verbascum* *Thapsus*, example of the demulcent mucilaeg.

*Gloriosa* *superba*, acrid powers.

*Helonias* *dioica*, anthelmintic and bitter tonic (the root).

The *Uvularias* of the United States should be examined.

## TERNSTROMIACEÆ.

*The Tea Tribe.*

China, seven or eight, North America four, South America, sixty or seventy, beautiful shrubs or trees. East Indies twenty. Africa one.

Properties well known in Green and Bohea Tea, and in *Ceanothus* of the United States, but it is correctly remarked by Dr. Lindley that they are imperfectly known of the family.

*Thea* *Bohea*,

*T.* *Viridis*, and

Species of *Camellia* }

Yield all the innumeral varieties of China Tea.]

*Ceanothus* *Americana*, U. S. Esculent and astringent.

*Camellia* *oleifera*—seeds yield sallad oil.

*C.* *Japonica* and all its beautiful garden varieties well known, are here.

The fruit of a species of *Saurauja*—acidulous resembling Tomatoes in flavor.

*Kielmeyera* *speciosa*—the leaves employed in Brazil for fomentations, abound in mucilage. (Pl. U. S. 58.)

*Wittelsbachia insignis* (of Martius.)

*Maximiliana regia* (of the same.)

*Cochlospermum insignia* (of Augst.  
(St. Hillaire.

Called in Brazil *Batua do curvo*. Used in that country in decoction of the roots to heal internal abscesses: they take it for all kinds of bruises. (Pl. U. S. 57.)

*Gordonia Lasianthus* is here.

*Franklinia* ——— is here.

*Ternstroemia* is here.

## THYMELEÆ.

### *The Mezereum Tribe.*

Sparingly in Europe and northern parts of the world, common in cooler parts of India and South America, abundant at the Cape of Good Hope and in New Holland. *Lindley*.

Bark of the family caustic, acting upon the denuded cuticle by exciting suppuration, and as a vesicatory applied to the sound skin—chewed, causes great pain in the mouth and fauces.

*Daphne mezereum*—common mezereum.

*D. Gnidium* ——— dyes wool yellow. In South of Europe.

*D. Lawreola* ——— berries poisonous to all animals, but birds eat them with impunity.

Yields tough meshed inner bark.

The lace bark of Jamaica is the

*D.* ———

*D. Bholua*—soft paper made from it in Nipal.

Excellent cordage is made from this family.

*Passerina tinctoria* dyes wool yellow in South of Europe.

*Struthiola* is here.

## UMBELLIFERÆ.

### *The Umbelliferous Tribe.*

Groves, thickets, plains, marshes, meadows, water-courses, wet places and waste places, chiefly in the northern parts of the Northern Hemisphere—also in the Southern.

De Candolle says there are 679 in the first, and 205 in the second, in the following proportions:

In the Old World,	663
In America,	159
In Australia,	54
In scattered Islands	14

The properties of the vegetable, exclusively of the fruit, is, *generally*, suspicious, and often very deleterious. The fruit (seeds) ~~nowise~~ dangerous, and often carminative and aromatic.

*Æthusa cynapium*, is the type of the toxicological herbage of this family; contains a peculiar alkali, called by its discoverer, Professor *Ficinus*, of Dresden, *Cynopia*.

*Apium graveolens*, by culture is, however, esculent in the stems and roots.

*Apium petroselinum*; esculent in the leaves, the roots ~~are~~ narcotic.

*Oenanthe pimpinelloides* } the tubers esculent.  
*Bunium bulbocastanum* }

*Ligusticum ajawain*, of Roxburg, a veterinary medicine (the fruit) in India.—*Ainslie*.

Samphire, the herb,  
 Skirret, roots,  
 Carrot-roots,  
 Parsnip roots, } esculent by culture chiefly.

*Heracleum gummiferum* has been heretofore supposed to yield Galbanum, but I am indebted to the author, *Don*, for an interesting pamphlet from London, within a week or two past, which places the fœtid gums thus:

*Dorema Ammoniacum* yields Ammoniac, called *Oshac* in Persia. The *Bubon Galbanum*, he thinks, does not yield the Galbanum, and believes Willdenow mistaken in referring it to the plant *Heracleum*. It is, therefore, uncertain what plant yields Galbanum.

*Heacleum giganteum* of the United States is well worth an inaugural dissertation.

Anise, Dill, Fennel, Coriander, Caraway, are all here.

The Umbelliferae of the United States require further investigation.

## URTICACEÆ.

### *The Nettle Tribe.*

All over the world.

Fibres tenacious and stringy; leaves of some narcotic; flowers of others bitter and tonic.

*Humulus lupulus*, yields *Lupulia*.

Urtica dioica	}	nettles—their effects well known.
U. urens		
U. stimulans, of Java		
U. pilulifera		
U. crenulata		
U. canadensis		

*Camahis sativa*; leaves narcotic. The Turks prepare *Malack* from it, which intoxicates; the Hottentots get drunk on it, and call it *Dacha*. A variety of this plant is supposed to yield a powerfully narcotic gum in Nipal, called *Cheris*, or *Cheris*.—*Ainslie*.

## ULMACEÆ.

### The Elm Tribe.

North of Asia, India, China, North America, Europe—in mountainous places.

Yields *Ulm* in various proportions—*ulmus fulva* the largest quantity.

*Celtis* is here.

## VALERIANEÆ.

### The Valerian Tribe.

North of India, Europe, South America, sparingly in Africa and North America; delights in temperate climes; anti-spasmodic, bitter, aromatic, tonic, vermifugal.

Valeriana officinalis;	}	valerian the drug (root.)
V. Phu;		
V. Celtica.		
V. Jatamani; Spikenard of ancients.		

*Valerianella*, Mache, French.

Lambs Lettuce; common salad, England; eaten every day as a salad; the young leaves.

Red Valerian is eaten in Sicily in the same way.

## VACCINEÆ.

### The Bilberry, or Whortleberry Tribe.

Abundant in North America; scarce in Europe; not un-

common on high lands, Sandwich Islands; bark and leaves astringent tonic, and somewhat stimulating; fruit contains malic and tartaric acid; all esculent.

Oxycoccus macrocarpa	}	
Vaccinium oxycoccus		
Vaccinium dumosum	}	The fruits of the Vaccinium are very sweet; that of the cranberry very tart.
V ——— arboreum		
V ——— stamineum; not eaten		

## VIOLACEÆ.

### *The Violet Tribe.*

Three suborders of this family.

1. Violæ.
2. Alsodineæ.
3. Sauvageæ.

1st, in Europe, Siberia and America, and a few in the Asiatic tropics; abundant in South America, where they are shrubs—the northern species being chiefly herbaceous.

The second are exclusively in South America and Africa, with the exception of one in Cochinchina, according to Loureiro the *Pentaloba*.

The 3d, exclusively in Africa and South America.

More or less emetic, in roots.

*Ionidium parviflorum*; yields in South America, an ipecac.

*I ——— poaya*; yields Brazilians, an ipecac.

*Poaya da praia* and *poaya branea* are the root of *Ionidium* *Ituba* of Kunth; is sold as *ipecacuanha*.

*Conohoria Lobolobo*; its foliage is used as a spinach in Brazil.

*Viola canina*; used in cutaneous affections.

*Anchietea salutaris*; purgative; in Brazil.

*Sauvagesia erecta*, is mucilaginous; used in Brazil for the eyes, in Peru for the bowels, and in the Antilles as a diuretic, in inflammation of the bladder of slight character; *Lindley*. Our native violets require further investigation.

## VITES.

### *The Vine Tribe.*

Two suborders in this family.

1. Vinifera, or samentacea.
2. Leacea.

The woods of the hotter parts of both hemispheres, particularly the East Indies.

Acid in the fruit; leaves astringent. Properties of raisins and wine well known. The acid of grapes is chiefly tartaric, with some malic. The sugar of grapes contains less carbon than common sugar, according to Turner.

## WINTEREÆ.

### *Winter's Bark Tribe.*

This small family is widely dispersed. Only ten in all are enumerated by Decandolle; of these, two are in New Holland, two in the hotter parts of America, two in the southern, and two in the northern territories of the same continent, one in China and Japan, one in New Zealand.

*Illicium anisatum*; the seeds carminative, India. They yield a fragrant essential oil. The Anisette de Bordeaux is flavoured with these seeds; the Chinese burn them in their temples.—*Ainslie*.

*Drymis Winteri* resembles cinnamon.

M. Cadet describes a bark by the name of Melambo, of similar properties.

*Drymis granatensis* is called *Casca d'Anta* in Brazil. Carminative in cholic; resembles *Drymis Winteri* in its tonic stimulant effects.

## ZYGOPHYLLÆ.

### *The Bean-Caper Tribe.*

America yields *Guaiacum*, *Portiera* and *Larrea*. *Fagonia* in South of Europe, the Levant, Persia, India; *Zygophyllea* also in those countries and also in South of Africa and New Holland (according to Ropera): *Tribulus* in the old world, within and without the tropics; *Melanthus* in Nipal, and the Cape of Good Hope.

The whole of the *Guaiacums* are excitant; some are bitter and acrid, and are diaphoretics and alteratives. they all yield *Guaiacine*.

The hardness of *Lignum vitæ* is owing to the singular distribution of the ligneous fibres, each layer crosses diagonally the preceding. Lindley, who has first published this fact, says it was pointed out to him by Professor

Voight. The singular wood lately imported in this city for archers' bows, and which is manufactured into walking canes, has an occasionally oblique dove-tailing of its fibres, giving an artificial or painted look to the polished surface. It is a palm wood and contains silex.

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## SECOND GREAT DIVISION OF VASCULARES.

### MONOCOTYLEDONOUS PLANTS.

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#### AROIDEÆ.

The plants of this family are herbaceous, with leaves sheathing at the base, flowers on a spadix, mostly enclosed in a spath, but sometimes naked or without it. They grow in tropical countries, where they are often arborescent. In the north of Europe and the United States, a few will be found, but they are herbaceous.

Yields an aromatic oil, which is carminative and anti-flatulent; hence its efficacy in cholic and dyspepsia.

Example—*Acorus Calamus*.—Common Calamus; the root in mastication in powder, or in infusion by hot water. No proximate principle yet obtained from it.

*Acorus* belongs to the natural order, *Piperita* of Lin.

The Indian plant is different from ours; it is called by Wildenow, *Acorus verus*; it is also a native of Poland, Flanders and Tartary.

*Calamus Rotang*.

#### ASPHODELEÆ.

##### *The Asphodel Tribe.*

Scattered over the world extensively. The Aloe in the southern part of Africa and in the West Indies. Two or three in Arabia and the East.

A bitter stimulant principle in the gummy viscid yellow juice; purgative in some, emetic in others. *Scilla maritima* yields *Scillitina* (Vogel).

**Aloes**, different species. **Drug Aloes**.

**Allium** contains a peculiar principle; the tribe is diuretic and expectorant; free phosphoric acid in the onion bulb.

**Dracæna Drago** is Gum Dragon.

**Asparagus officinalis** is here. Yields *Asparagin*. (Turner.)

**Aletris farinosa**, U. States, is here. (Bigelow.)

**Scilla lilio-hyacinthus**, } The bulba.

**Anthericum bicolor**, }  
Purgative. (Decandolle.)

## COLCHIACEÆ.—SEE MELANTHACEÆ.

*The Meadow Saffron Tribe, or Colchicum Tribe.*

## GRAMINEÆ.

*The Grass Tribe.*

Every where and well known.

The following I adopt from the arrangement employed by Nees V. Esenbeck in his account of Brazilian grasses, as subdivisions of the family.

1. **Panicæ.**—*Panicum*, *Paspalus*, *Cenchrus*.
2. **Olyreæ.**—*Luziola*, *Pharus*, *Olyra*.
3. **Saccharinæ.**—*Saccharum*, *Andropogon*, *Anthistiria*.
4. **Stipeæ.**—*Stipa*, *Chætaria*.
5. **Agrostæ.**—*Phalaris*, *Vilfa*, *Agrostis*, *Spartina*.
6. **Chlorideæ.**—*Pappophorum*, *Chloris*, *Eleusine*.
7. **Hordeaceæ.**—*Lolium*, *Triticum*, *Secale*.
8. **Festucææ.**—*Avena*, *Arundo*, *Gyncrium*, *Cynosurus*, *Bromus*, *Poa*.
9. **Oryzææ.**—*Leersia*, *Oryza*.
10. **Bambuseæ.**—*Arundinaria*, *Bambusa*, *Streptochaeta*.

## IRIDEÆ.

*The Iris, or Flag Tribe, or Corn Flag Tribe.*

The Cape of Good Hope, middle parts of Europe and North America, a few within the tropics, some in South America.

The rhizomas of many of them stimulating and purgative.

*Iris florentina*; night, fragrant by the smell of violets.

*I. tuberosa*; purgative.

*I. versicolor*,

*I. verna*, and other U. States' species, } purgative.

*I. pseudo-azorus*; the roasted seeds, according to Mr. Gray, are a good substitute for coffee.

*Crocus sativus*; the dried, stigmas, yield Polychroite, (is totally destroyed by solar rays.)

## LILIACEÆ.

### *The Lily Tribe.*

Temperate parts of Europe, America, Asia; the mountains of Mexico, (*Calachortus* is there,) New Holland, (*Blandfordia* is there.)

*Erythronium dens canis*, United States, medicinal.—*Bigelow*.

*E. ———* *Indicum*; roots, in India, a veterinary medicine in strangury and fever of horses.

*Polyanthes tuberosus*; *Tuberosa*, a singular phenomenon is exhibited by this fragrant plant. It emits its scent most strongly after sunset, and has been noticed in a sultry evening, after thunder, to dart small sparks, or lurid flame, in great abundance from such flowers as were fading.—*Ed. P. I.* 3, 415.

## MELANTHACEÆ.

### *The Colchicum Tribe.*

Cape of Good Hope, Europe, North America, Asia, tropics of India, and New Holland.

Every individual poisonous; *Colchicum* and *Veratrum* the types of the poison—they yield *Veratria*, which is errhine, effects the mucous coat of stomach and intestines.

*Colchicum autumnale*; the cormus is an acrid, active cathartic, narcotic and diuretic. The seeds also medicinal.

*Veratrum album*; similar to *Colchicum*.

*V. ———* *viride*, United States, an acrid stimulant, emetic, and, by secondary effects, sedative.

## SCITAMINEÆ.

*The Ginger Tribe.*

Tropical climes altogether.

Yields an aromatic volatile oily principle, without any thing poisonous in it. Hence the use of the roots and seeds in diet, and to give flavor to tinctures and other pharmaceutical preparations. Example 1. *Zingiber officinale*.—*Roscoe* and *Jaquin*. Synonym, *Amomum Zingiber*, Common Ginger, used in powder. The root is preserved in the East and West Indies, and lozenges are made of the powder in this and other countries. In common ginger nuts, (a kind of small round cake,) when properly made, without any, or with little butter, the ginger is useful in certain weak states of the stomach. There is an acrid resin in ginger, involved in a large quantity of fecula—acts on the nerves of the mucous membrane; possesses sialagogue properties.

<i>Alpinia racemosa</i> ,	{	Galangale.		
A. <i>Galanga</i> ,				
<i>Curcuma Zedoaria</i> ,	{	Roots {		
C. <i>Zerumbet</i> ,			{	Zeodary.
<i>Zingiber officinale</i> ,				
			Ginger.	

*Amomum aromaticum*—The seeds on the eastern frontiers of Bengal are used for Cardomums.

<i>Matonia Cardamomum</i> ,	{	Is the plant yielding the lesser Cardamom seeds of the coast of Malabar.
<i>Elletaria Cardamomum</i> ,		
<i>Ammomum Repens</i> ,		
<i>Ammonum Maximum</i> , is another sort.		

A. *Grana Paradisi*—seeds called greater Cardamoms.

*Curcuma longa* is a yellow dye well known.

Used by the native practitioners in India to cleanse foul ulcers. *Ainslie*.

C. *augustifolia*, yields excellent arrowroot fecula at Travancore, East Indies.

*Globba uviformis*—the fruit esculent.

*Kempferia rotunda* is here.

## PALMA.

*The Palm Tribe.*

Tropical countries in immense numbers. Africa, Asia, New-Holland and America.

Yields wine, oil, wax, flour, sugar according to Humboldt; in addition : thread, utensils, weapons, food habitations, according to Von Martius.

*Chamærops Palmetto*, of the United Staates is the most northern Palm.

*Sago* is the fecula yielded by all except the *Areca Cathecu*, (Beetle Nut.) The

*Sagus Farinifera* produces the most.

*Ceroxylon andicola* is the wax Palm of Humboldt.

*Calamus Drabo*, of the eastern islands of the Indian Archipelago, yields a dark coloured, inodorous insipid resin called *Dragon's Blood* : is a finer kind than that from the *Pterocarpus Draco*.

## MARANTACEÆ.

### *The Arrow-Root Tribe.*

Greater part in the tropics of America and Africa; some in India; some wild beyond the tropics, yields universally an esteemed fecula called arrow-root.

<i>Maranta arundinacea</i>	} West Indies; the rhizomes of these three yield the fecula.
M — allouya	
M — nobilis	
M — ramocissima, of East Indies, is the same; the fleshy cornus of some species of cannas, or Indian reeds, are eaten in Peru.	

*Phrynium dichotomum* produces tough cordage.

*Calathea*s, of South America; the leaves are worked into baskets.

*Maranta arundinacea*; juice efficacious against poisoned wounds. *Ainslie*.

## SMILACEÆ.

### *The Smilax Tribe.*

General except, and especially in Asia and South America.

*Dirarëtic demulcent properties.* *Sarsaparilla* is the type. *Smilax sarsaparilla*; common *sarsaparilla*.

S — aspera, its substitute in the south of Europe.

S — *China-root*, (nearly obsolete;) according to the Abbe Pochon, the Chinese often eat it instead of rice, and it contributes to make them lusty. *Ainslie*.

*Medeola Virginica*, of the United States; medicinal.

*Trillium*—different species; the roots emetic, berries mawkish taste; suspicious.

*Convallaria* } Solomon's seal; are here.  
*Smilacina* }

Aromatic stimulant properties.

## ORCHIDEÆ.

### *The Orchis Tribe*

Lindley proposes seven sub-orders. 1. Neottieæ. 2. Arethuseæ. 3. Gastrodieæ. 4. Ophrydeæ. 5. Vandæ. 6. Epidendreæ. 7. Malaxideæ. 8. Cyripideæ. These sub-sections are excellent, and very necessary in this extensive family.

In all parts of the world, except upon the verge of the frozen zone and in very dry climates. The product is a peculiar fecula, from the root called Salep, which consists almost entirely of a peculiar principle called Bassorine, (see Umbelliferæ)—very nutritive.

The family has a remarkable bizarre appearance in its flowers, resembling insects, monkeys, helmets, soldiers &c.

*Orchis mascula* }  
*O. morio* } and others, produce Salep of commerce.

*Bletia verecunda*, stomachic root.

A vegetable glue is obtained in Brazil by the inspissation (by boiling) of the viscid juice of the South American species, such as the *Catasetums*, *Cyrtopodiums*, &c.

*Vanilla*, a well known aromatic substance, is the succulent fruit of a climbing West India plant of this family.—*Lindley*.

The Orchidean plants of the United States are beautiful, and yields Salep. Would form an excellent subject for an inaugural dissertation.

## SECOND GREAT DIVISION OF PLANTS.

### *Cellulares.*

Group 1. Fillicoidæ. Group 2, Muscoidæ: Group 3, Aphyllæ.

The Fillicoidæ generally contains a thick astringent mucilage with a little aroma. Hence the plants of this family are usually esteemed pectoral.

*Adiantum pedatum*, and

*Capillum Veneris*, especially, have had reputation in breast complaints. The syrup of *Capillaire* has long been esteemed in Europe. A decoction of the plant is emetic.

The *Polypodium Calaguala* of Peruvians,

*Polypodium crassifolium*

*Acrostichum Huacsaro*

Are said to be solvent, deobstruent, sudorific, and anti-rheumatic. (*Pharmacœpia Madritensis* 1792.) also Lambert's Illustrations of the genus *Cinchona*.

*Adiantum melanocaulon*: the leaves are esteemed tonic in India. (*Ainslie*.)

*Mertensia dichotoma*, called *Samanbaya* in Brazil, affords pipe tubes for smoking.

*Nephrodium esculentum*, the roots are eaten in Nipal, according to Dr. Buchanan.

*Angiopteris erecta*, the bruised fronds are used in the Sandwich Islands to give fragrance to cocoa-nut oil. Very fragrant.

*Pteris acquilina*—the roots furnish the inhabitants of Parma and Gomera with food.

*Polipodium phymatodes*—the bruised fronds are used in the Sandwich Islands to scent coco-nut-oil, like the fern noticed above.

*Aspidium felix mas*, the *Rhizoma* has been analyzed by *M. Morin*, who found it to contain

1st, A volatile oil.

2d. A fat matter composed of elaine and stearine.

3d. Gallic acid and acetic acid.

4th. Uncrystallizable sugar.

5th. Tannin.

6th. Soap.

7th. A gelatinous matter insoluble in water and in alcohol. It contains also the sub-carbonate, sulphate and hydrochlorate of potash, carbonate and phosphate of lime, alumine, silex, and oxide of iron. *Brewster*, 2. 176.

*Angiopteris erecta*—the roots used for food in the Sandwich Islands under the name of *Nehai*.

*Diplazium esculentum* }

*Cyathea medullaris* }

*Gleichenia dichotoma* }

Are all occasionally used for food in different countries.

**Pteris aquilina**        }  
**Aspidium filix mas** } Have been used in the making of  
 beer.  
**A. fragrans** is used for tea.

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## E R R A T A .

In the list of families p. 12, *Ilicineæ* should be placed among the Dicotyldeonous families.

**EBENACEÆ** should have been inserted among the natural families of Dicolytedenous plants.

*Diospyros* is found there. (The Persimon tree.)

**OLIVILE**—the peculiar proximate principle of Olives was omitted among the alkalis and proximate principles.

**RHUBARBINE**—the active peculiar principle of the Rhubarbs was also omitted in that list.

**POLYGALINE** } Peculiar vegetable principles from *Polygala Senega* were also omitted.  
**SENEGINE** }

**COUMARIN**—The peculiar vegetable principle of the *Coumarouma odorata* also omitted.

**ALTHEIN**—the peculiar vegetable principle of *Althæa officinalis* also omitted.

**CAFFEIN**—the peculiar principle of *Coffea Arabica*, was also omitted.

## [APPENDIX.]

### ADVERTISEMENT.

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The Therapeutic Institute was commenced in 1831, by the patronage of nine gentlemen; seven of whom were students and doctors of medicine, and two of law, who solicited a Course of Lectures. It appears now to be permanently established, and justifies the expectation of continuing to prosper and increase in numbers, as well as estimation for the usefulness of the instruction obtained in it. No detail therefore, need now be given of its objects, which are well known to the students, on whose patronage and attachment to the Lecturer as a teacher, its support entirely depends. A few words may be said of the time and terms of the Course approaching.

The winter Course, on *Materia Medica*, Botany and Toxicology, will be of three months continuance, during which two Lectures each week, of each one hour's length will be given. The introductory will be delivered at 9 o'clock, A. M. on the 9th of November; and will be continued on Wednesdays and Saturdays thereafter at the same hour, 9 (A. M.) until the class shall be made up. The hour will then be fixed *by the class*. Two Lectures a week for three months from the first regular Lecture of the course, not including the Introductory, will be given at times to suit the engagements with the public Lectures. A part of the 4th month will be appropriated to the examinations.

The fee hereafter, to *each separate course*, will be eleven dollars. No deduction made for the Prodrôme.

No extra charge for the certificate given at the end of each course, nor for the certificate of the matriculation of the perpetual pupil. This last is also an acknowledgement of the payment of the fee.

The Therapeutic Diploma is five dollars on drawing paper, and six on parchment—it is optional with the student to take it; none, however, but perpetual pupils are entitled to take it.

This diploma constitutes the only extra expense beyond the ticket fee.

The perpetual ticket, entitling the student to all the courses, and to take the Therapeutic Diploma if he wish it, is twenty-one dollars, provided it be taken at once, or during the first three weeks of the course, from the first regular Lecture.

The perpetual Pupil is considered a matriculated Therapist, and receives a certificate of this matriculation under seal of the Institute.

If a student who has taken a ticket to a single course, shall determine to become a perpetual pupil any time during that course after the first three weeks of it shall have been gone over, (calculating from the first regular Lecture, but not from the introductory)—then the charge for the perpetual ticket will be twenty-six dollars. This regulation is not retrospective, but will take effect on the first Monday of November, of this year.

**LIST OF STUDENTS OF THIS INSTITUTE, FROM ITS  
ESTABLISHMENT IN 1831, TO THE COMMENCEMENT OF THE  
WINTER COURSE OF 1833-4.**

*Spring-and-Summer Course 1831.—(May and June.)*

William F. Clemson, (Student of Law, of Phila.)  
Edward D. Gazzam, (now M. D. Un. of Penn.) of Penn.  
Student of Med.  
Abraham S. Hill, M. D. (Un. of Penn.) of Georgia.  
Daniel C. M'Leod, of Georgia, (now M. D. Un. of Penn.  
and assistant Surgeon in the Navy.)  
Volney Metcalf, M. D. (Un. of Penn.) of Mississippi.  
James Swaim, Student of Med. (Un. of Penn.) of Philada.  
Oswald Thompson, Student, now attorney at Law, of Philada.  
Coburn Whitehead, M. D. of Penn. } Un. of Penn.  
Alfred A. Woodhull, M. D. of N. J. }

*Spring-and-Summer course 1832.—(May and June.)*

H. H. Barker, Pennsylvania.  
Willie J. Eppes, Virginia, Stud. of Med. (Un. of Penn.)  
Maurice Fitz Gibbon, Virginia, Stud. of Med. (Un. of Penn.)  
James Hopkins, Pennsylvania, (Stud. of Pharmacy, Frederick  
Brown.)  
John Hazlehurst, Pennsylvania.  
A. F. E. Mickle, M. D. (of Un. of Penn.) N. Jersey.  
George B. M'Night, Dis. of Colum. ass't. Surg. U. S. Navy.  
Edward Peace, Penn. } Stu. of Med. Un. of Penn.  
George W. Peete, Va. }  
George W. Palmer, M. D. N. York, ass't. Surg. U. S. Navy.  
Henry S. Reynolds, M. D. (of Un. of Penn.) Va.  
Samuel W. Ruff, Virginia,  
Wm. A. W. Spotswood, Va. } Ass't. Sur. of U.  
Richard K. H. Sims, M. D. (Un. of Penn.) } S. Navy.  
Wm. Whelan, M. D. (Un. of Penn.) }

*Autumn Course, 1832.—(September and October.)*

[P.P.] Samel Barrington, M. D. (of Un. Penn.) Penn. ass't.  
Surg. U. S. Navy.

- [P.P.] Joann F. Brooke, M. D. (of Un. of Penn.) Past ass't. Surg. U. S. Navy, Virginia.
- [P.P.] Benjamin Bradly Beale, Alabama, (Stud. of Med. Un. of Penn.)
- [P.P.] Edward Duffel, jr. Louisiana, (Stud. of Med. Un. of Pa.)
- Edwin Barry Eichholtz, Penn. (Stud. Pharmacy, Frederick Brown.)
- [P.P.] Maurice Fitz Gibbon, Pa. (Stud. of Med. Un. of Pa.)
- [P.P.] Victor L. Godon, Penn. (Stud. of Med. Un. of Penn.)
- [P.P.] William Pennock Hansford, Virginia, (Stud. Pharmacy, Samuel P. Griffiths, jr.)
- [P.P.] James Hopkins, Pa. (Stud. Pharmacy, F. Brown.)
- [P.P.] George Green M'Dermott, Louisiana, (Stud. of Med. Un. of Penn.)
- Anthony Isaacs Olmsted, Penn. (Stud. Pharmacy, F. Brown.)
- [P.P.] Thomas A. Parsons, Georgia, (Stud. of Med. Un. of Pa.)
- [P.P.] Geo. W. Peete, Virginia, (Stud. of Med. Un. of Penn.)
- [P.P.] Henry S. Rennolds, M. D. (Un. of Penn.) Virginia.
- [P.P.] Richard K. H. Sims, M. D. (Un. of Penn.) ass't. Surg. U. S. Navy.
- |   |                              |
|---|------------------------------|
| [P.P.] John J. H. Straith, Virginia,    | } Stud. of Med. Un. of Penn. |
| [P.P.] Austin M. Walker, Georgia,       |                              |
| [P.P.] Walter Williamson, Pennsylvania, |                              |
| [P.P.] Walter Wade, Mississippi.        |                              |
- [P.P.] Wm. Whelan, M. D. (of Un. Pa.) ass't. Surg. U. S. N.,
- [P.P.] J. V. Freeman Walker, Georgia.

**LIST OF PUPILS, ATTENDING THE WINTER COURSE OF  
1832-3—ENDING THE 2d OF MARCH, 1833.**

- Eugene H. Abbadie, St. Med. Un. Penn. (Pa.)
- [P.P.] Napoleon Constantine Barrabino, M. D. of Un. Penn. (Pa.) passed candidate for ass't. Surg. U. S. Navy.
- [P.P.] Samuel Barrington, M. D.—U. S. Navy.
- [P.P.] John F. Brooke, M. D.—U. S. Navy.
- [P.P.] Benjamin Bradley Beale.
- William Clarke, St. Med. Un. Penn. (Virginia.)
- [P.P.] Edward Duffel, jr.
- John Henry Edwards, St. Med. Un. Penn. (N. Carolina.)
- [P.P.] Samuel Carswell Ely, St. Med. J. Col. (Pa.)
- [P.P.] Willie Jones Eppes,
- [P.P.] Maurice Fitz Gibbon,

- [P.P.] Victor L. Godon.  
 [P.P.] James M. Green, M. D. Surg. U. S. Navy, (Pa.)  
 James Hagan, M. D. of Virginia. (Pa.)  
 [P.P.] William P. Hansford.  
 [P.P.] John J. Hawling, St. Med. Un. Penn. (Virginia.)  
 [P.P.] Richard Jones Harvey, St. Med. Un. Penn. (Pa.)  
 [P.P.] James Hopkins.  
 William S. King, St. Med. Un. Penn. (Pa.)  
 [P.P.] William G. Lewis, St. Med. J. Col. (Pa.)  
 [P.P.] George Green M'Dermott.  
 [P.P.] William M'Clenahan, M. D. of Un. Penn. (Virginia.)  
 Passed candidate for ass't. Surg. U. S. Navy.  
 [P.P.] Thomas Stith Malone, St. Med. Un. Penn. (Alabama.)  
 John Shaum Messersmith, St. Med. J. Col. (Pa.)  
 [P.P.] Thomas A. Parsons.  
 Charles Hayes Patton, St. Med. Un. Penn. (Alabama.)  
 [P.P.] George W. Peete.  
 Abel F. Picot, St. Med. Un. Penn. (Virginia.)  
 [P.P.] Henry S. Rennolds, M. D. passed candidate for ass't.  
 Surg. U. S. Navy.  
 [P.P.] Samuel W. Ruff, M. D. passed ass't. Surg. U. S. Navy.  
 [P.P.] Waters Smith, M. D. Surg. U. S. Navy.  
 [P.P.] James Swaim.  
 [P.P.] John J. H. Straith.  
 [P.P.] George Terrill, M. D. Surg. U. S. Navy, (Virginia.)  
 [P.P.] Walter Wade.  
 [P.P.] J. V. Freeman Walker.  
 [P.P.] Wm. Whelan, M. D.—U. S. Navy.  
 [P.P.] Walter Williamson.  
 David M. Wright, St. Med. Un. Penn. (N. Carolina.)

**LIST OF PUPILS, ATTENDING THE SPRING AND SUMMER  
 LECTURES OF 1833, ON BOTANY, INDIGENOUS MATERIA ME-  
 DICA, AND TOXICOLOGY, ENDING JULY 1st. 1833.**

- [P.P.] John Thomas Alexander, St. Med. Un. Pa. (Louisiana.)  
 William Armistead, St. Med. Un. Penn. (N. Carolina.)  
 [P.P.] Ralph C. Armstrong, St. Med. Un. Penn. (Geo.)  
 [P.P.] Henry A. Binford, St. Med. Un. Penn. (Alabama.)  
 [P.P.] Euclid Borland, M. D. Un. Penn. ass't. Surg. U. S.  
 Navy, (Virginia.)

- [P.P.] William S. Boutwell, St. Med. Un. Penn. (Virginia.)  
 Lieut. Samuel L. Breese, U. S. Navy, (New York.)  
 James Bryan, St. Med. Un. Penn. (Pennsylvania.)  
 Joseph Carson, M. D. Un. Penn. (Pennsylvania.)  
 [P.P.] Benjamin F. Chambers, St. Med. Un. Penn. (South Carolina.)  
 Ethelbert A. Coleman, M. D. Un. Penn. (Virginia.)  
 William G. Cook, M. D. Un. Maryland, (Virginia.)  
 Francis W. Dancy, St. Med. Un. Penn. (Alabama.)  
 [P.P.] Daniel Egbert, M. D. asst. Surg. U. S. Navy, (New Jersey.)  
 [P.P.] Edwin Barry Elchholtz, St. Pharmacy, (Penn.)  
 [P.P.] George W. Evans, M. D. Un. Penn. (Penn.)  
 Holton, Ganson, St. Med. (New York.)  
 [P.P.] Calvin Graham, St. Med. Un. Penn. (Virginia.)  
 [P.P.] David R. Gregg, St. Med. Un. Penn. (South Carolina.)  
 [P.P.] Edward H. Henry, St. Med. Un. Penn. (Virginia.)  
 [P.P.] Peter K. Hull, St. Med. Un. Penn. (Virginia.)  
 John C. Jenkins, M. D. Un. Penn. (Pennsylvania.)  
 [P.P.] Madison Johnston, St. Med. Un. Penn. (S. Carolina.)  
 [P.P.] James S. Jones, St. Med. Un. Penn. (Georgia.)  
 Edward H. Kennedy, St. Med. Un. Penn. (Pennsylvania.)  
 [P.P.] William F. Kennedy, St. Med. Un. Penn. (Lou.)  
 [P.P.] John W. Kirk, St. Med. Un. Penn. (S. Carolina.)  
 [P.P.] Girard M'Leven, St. Pharmacy, (Pennsylvania.)  
 [P.P.] Aaron Mauck, St. Med. Un. Pa. (Penn.)  
 Newton May, M. D. Un. Penn. (Maryland.)  
 S. Gratz Moses, St. Med. Un. Penn. (Penn.)  
 [P.P.] Anthony Isaacs Olmstead, St. Pharmacy, (Penn.)  
 [P.P.] Edward Poole, Esq. (Penn.)  
 Lemuel B. Powell, St. Med. Un. Penn. (N. Carolina.)  
 [P.P.] Henry W. Reese, St. Med. Un. Penn. (Virginia.)  
 [P.P.] Robert B. Rennolds, St. Med. Un. Penn. (Virginia.)  
 [P.P.] Charles Skinner, S. Med. Un. Penn. (N. Carolina.)  
 [P.P.] James B. Slade, M. D. Un. Penn. (N. Carolina.)  
 [P.P.] Turner H. Southall, St. Med. Un. Penn. (Virginia.)  
 [P.P.] Richard Stubbs, St. Med. Un. Penn. (W. Indies.)  
 Daniel Trigg, M. D. of Un. Penn. (Virginia.)  
 [P.P.] Samuel Wilson, St. Med. Un. Penn. (Virginia.)  
 [P.P.] Samuel Barrington, M. D. U. S. Navy.  
 [P.P.] John F. Brooke, M. D. U. S. Navy.  
 [P.P.] Edward Duffel, Jr. M. D. Un. Penn. (Lou.)

- [P.P.] Victor L. Godon, St. Med. Un. Penn. (Penn.)  
 [P.P.] James M. Green, M. D. Surg. U. S. Navy, (Per  
 [P.P.] William P. Hansford, M. P. of Col. of Pharmac  
 ladelphia.  
 [P.P.] John S. Hawling, St. Med. Un. Penn. [Virginia  
 [P.P.] Geo. Green M'Dermott, St. Med. Un. Penn. [L  
 [P.P.] Thomas Stith Malone, St. Med. Un. Penn. [Ala  
 [P.P.] Thomas A. Parsons, St. Med. Un. Penn. [Georg  
 [P.P.] Waters Smith, M. D. Surg. U. S. Navy, [Florid  
 [P.P.] George Terrill, M. D. Surg. U. S. Navy, [Virgi  
 [P.P.] Walter Wade, M. D. Un. Penn. [Mississippi.]

**LIST OF PUPILS, ATTENDING THE AUTUMN LEC  
 OF 1833, ON BOTANY, INDIGENOUS MATERIA MEDIC  
 TOXICOLOGY, ENDING 9TH OF NOVEMBER.**

- [P. P.] John Thomas Alexander, St. Med. Un. Penn.  
 isiana.)  
 [P. P.] Ralph C. Armstrong, St. Med. Un. Penn. (Ge  
 [P. P.] Henry A. Binford, St. Med. Un. Penn. (Alaba  
 [P. P.] Samuel Barrington, M. D., U. S. N.  
 [P. P.] Thomas Williams Battey, St. Med. Un. Penn.  
 Robert Bridges, M. D., Philadelphia.  
 [P. P.] William S. Boutwell, St. Med. Un. Penn. (Vi  
 James Bryan, St. Med. Un. Penn. (Pennsylvania.)  
 [P. P.] Benjamin F. Chambers, St. Med. Un. Penn.  
 Carolina.)  
 [P. P.] William Denny Downing, St. Med. Un. Penn. (N.  
 [P. P.] Daniel Egbert, M. D., As. Surg. U. S. N. (N.  
 [P. P.] Edwin Barry Eichholtz, St. Pharmacy. (Penn  
 Clement A. Finley, M. D., Surgeon U. S. Army. (Oh  
 [P. P.] Victor L. Godon, St. Med. Un. Penn. (Penn.)  
 [P. P.] Calvin Graham, St. Med. Un. Penn. (Virgini  
 [P. P.] David R. Gregg, St. Med. Un. Penn. (S. Car.  
 [P. P.] Peter K. Hull, St. Med. Un. Penn. (Virginia  
 [P. P.] John S. Hawling, St. Med. Un. Penn. (Vir.)  
 [P. P.] Madison Johnston, St. Med. Un. Penn. (S. Ca  
 [P. P.] James S. Jones, St. Med. Un. Penn. (Georgi  
 [P. P.] William E. Kennedy, St. Med. Un. Penn. (La  
 [P. P.] John W. Kirk, St. Med. Un. Penn. (S. Carol  
 [P. P.] Aaron Mauck, St. Med. Un. Penn. (Pennsy  
 [P. P.] Thomas Stith Malone, St. Med. Un. Penn. (Al

- [P. P.] Anthony Isaacs Olmstead, St. Phar. (Penn.)  
 [P. P.] Edward Poole, Esq. (Pennsylvania.)  
 [P. P.] James Madison Parsons, St. Med. Un. Penn. (Geo.)  
 [P. P.] Thomas A. Parsons, St. Med. Un. Penn. (Geo.)  
 [P. P.] Henry W. Reese, St. Med. Un. Penn. (Virginia.)  
 [P. P.] Robert B. Rennolds, St. Med. Un. Penn. (Vir.)  
 [P. P.] Charles Skinner, St. Med. Un. Penn. (N. Carolina.)  
 [P. P.] Turner H. Southall, St. Med. Un. Penn. (Virginia.)  
 [P. P.] John V. Freeman Walker, St. Med. Jeff. Col. (Geo.)  
 [P. P.] James M. Williams, St. Med. Un. Penn. (Mississippi.)  
 [P. P.] William Zantzinger, M. D., Philadelphia.
- 

**Names of perpetual pupils of the Institution, from its  
 foundation, up to November 1st, 1833.**

**P. P. OF AUTUMN, 1832.**

- Benjamin Bradley Beale, M. D.  
 John F. Brooke, M. D., U. S. N.  
 Samuel Barrington, M. D., U. S. N.  
 William F. Clemson, Esq. (Philadelphia.)  
 Samuel Carswell Ely, St. Med. J. Col. (Penn.)  
 Edward Duffel, Jr. M. D., Un. Penn. (Lou.)  
 Willie Jones Eppes, M. D.  
 Maurice Fitz Gibbon, M. D.  
 Edward Gazzam, M. D.  
 Victor L. Godon, St. Med. Un. Penn. (Penn.)  
 James M. Green, M. D., Surg. U. S. N. (Penn.)  
 Abraham S. Hill, M. D.  
 James Hopkins, St. Phar. (Philadelphia.)  
 William P. Hansford, M. P., of Coll. of Phar. Philadelphia.  
 Volney Metcalf, M. D.  
 David M'Leod, M. D., Asst. Surg. U. S. N.  
 George Green M'Dermott, St. Med. Un. Penn. (Louisiana.)  
 G. B. M'Night, Asst. Surg. U. S. N.  
 G. W. Palmer, M. D., Surgeon U. S. N.  
 George W. Peete, St. Med. Un. Penn. (Virginia.)  
 Thomas A. Parsons, St. Med. Un. Penn. (Geo.)

Henry S. Rennolds, M. D., Asst. Surg. U. S. N.  
 Samuel W. Ruff, M. D. Passed As. Surg. U. S. N.  
 R. K. H. Sims, M. D., U. S. N.  
 W. A. W. Spotswood, U. S. N.  
 James Swaim. (Philadelphia.)  
 John J. H. Straith, M. D.  
 Waters Smith, M. D., Surg. U. S. N. (Florida.)  
 Oswald Thompson, Esq.  
 Austin M. Walker, M. D.  
 J. V. Freeman Walker, St. Med. Jef. Col.  
 Wm. Whelan, M. D., Asst. Surg. U. S. N.  
 Colburn Whitehead, M. D.  
 Walter Williamson, M. D.  
 Alfred Woodhull, M. D.  
 Walter Wade, M. D., (Mississippi.)

#### P. P. OF WINTER, 1832-3.

Napoleon Constantine Barrabino, M. D. (Penn.) &  
 U. S. N.  
 John J. Hawling, St. Med. Un. Penn. (Vir.)  
 Richard Jones Harvey, now M. D. (Penn.)  
 William G. Lewis, St. Med. J. Col. (Penn.)  
 William M'Clenahan, M. D. Asst. Surg. U. S. N.  
 Thomas Stith Malone, St. Med. Un. Penn. (Alab.)  
 George Terrill, M. D., Surg. U. S. N. (Virginia.)

#### P. P. OF SPRING AND SUMMER, 1833.

John Thomas Alexander, St. Med. Un. Penn. (L.)  
 Ralph C. Armstrong, St. Med. Un. Penn. (Geo.)  
 Henry A. Binford, St. Med. Un. Penn. (Alabama)  
 Euclid Borland, M. D., Un. Penn., As. Surg. U. S. N.  
 William S. Boutwell, St. Med. Un. Penn. (Virg.)  
 Benjamin F. Chambers, St. Med. Un. Penn. (S. C.)  
 Daniel Egbert, M. D., As. Surg. U. S. N. (N. C.)  
 Edwin Barry Eichholtz, St. Pharmacy. (Penn.)  
 George W. Evans, M. D., Un. Penn. (Penn.)  
 Calvin Graham, St. Med. Un. Penn. (Virginia.)  
 David R. Gregg, St. Med. Un. Penn. (S. Carol.)  
 Edward H. Henry, St. Med. Un. Penn. (Virginia.)  
 Peter K. Hull, St. Med. Un. Penn. (Virginia.)

Madison Johnston, St. Med. Un. Penn. (S. Car.)  
 James S. Jones, St. Med. Un. Penn. (Georgia.)  
 William E. Kennedy, St. Med. Un. Penn. (Lou.)  
 John W. Kirk, St. Med. Un. Penn. (S. Carolina.)  
 Girard McLeven, St. Pharmacy. (Pennsylvania.)  
 Aaron Mauck, St. Med. Un. Penn. (Pennsylvania.)  
 Anthony Isaacs Olmstead, St. Phar. (Pennsylvania.)  
 Edward Poole, Esq. (Pennsylvania.)  
 Henry W. Reese, St. Med. Un. Penn. (Virginia.)  
 Robert B. Rennolds, St. Med. Un. Penn. (Virginia.)  
 Charles Skinner, St. Med. Un. Penn. (N. Carolina.)  
 James B. Slade, M. D., Un. Penn. (N. Carolina.)  
 Turner H. Southall, St. Med. Un. Penn. (Virginia.)  
 Richard Stubbs, St. Med. Un. Penn. (W. Indies.)  
 Samuel Wilson, St. Med. Un. Penn. (Virginia.)

#### P. P. OF AUTUMN, 1833.

Thomas Williams Battey, St. Med. Un. Penn. (Georgia.)  
 William Denney Downing, St. Med. Un. Penn. (Penn.)  
 James Madison Parsons, St. Med. Un. Penn. (Georgia.)  
 Robert L. Roddey, St. Med. Un. Penn. (S. Carolina.)  
 George W. Thomas, St. Med. Un. Penn. (Georgia.)  
 James N. Wingfield, St. Med. Un. Penn. (Georgia.)  
 James M. Williams, St. Med. Un. Penn. (Mississippi.)  
 William Zantzinger, M. D. (Philadelphia.)



*Reproductive Barbed wire  
Silver moss*

[For the Public Ledger.]

Varieties in Plants.

MR. EDITOR:—At the meeting of the Academy of Natural Sciences, noticed in Wednesday's issue, a specimen of wheat was submitted, from the stem of which "a spikelet of *Bromus* had sprung;" also a specimen of canary grass, "in which a similar tendency to change into a distinct species was observed." It is quite possible to engraft the species of genera; and contiguous plants of similar species show variation on hybridization, brought about by the fertilizing pollen. Thus varieties are constantly produced.

Dr. Darlington's remarks in his *Flora Cæritica* on this "wheat and cheat" question, are worth copying. After describing *Bromus Secalinus*, he says, "This foreigner is a well known intruder among our crops of wheat and rye, and often appears in the same fields for a year or two after those crops, but being an annual, it is soon choked out by the perennial grasses."

The vulgar error that this plant is *transmuted wheat*, came to us with the earliest emigrants, and a certain class of our farmers, notwithstanding the boasted march of mind, yet so believe. Any one, however, who has had an opportunity to observe the uniformity and constancy of the laws which govern the development of living bodies, and yet believe in the transmutation of genera and species, may be fairly placed in the category of him who believes in equivocal generation.

Another gentleman called to notice the fact that a piece of ground near the Delaware river had produced a growth of "*Polygonum Orientale*, an East India plant, and *Cleome pungens*," a West India plant. I cannot understand why it is remarkable that these plants should not be found in that locality; both are naturalized foreigners, naturalized throughout the whole United States. It is in no way more extraordinary that what is constantly going on under the eye directed to its observation. Any piece of ground not under culture, changes its plants year after year, in the most astounding manner, totally different genera and species springing up and subverting those of the previous year. An acre of waste soil will furnish material enough for a history.

L. D. Z.

## NOTICE.

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THE Valedictory to the autumn class, and the Introductory address to the winter course, will be delivered during the same hour, at nine o'clock on Saturday the 9th instant, at which time the certificates for the examimates and those for the autumn pupils, will be distributed. The Prodrôme is a text book purposely written and printed by the Lecturer, for aiding the student's attention to the lectures. It will be ready for the class at that time, and will hereafter pertain to the tickets of every course. Students and others, not belonging to the classes can obtain it in the Lecture room at any time. The cost is one dollar and twenty-five cents.

Each member of the class has the privilege of bringing a friend to the successive lectures for two weeks from the first regular lecture of the course. He has the further privilege of bringing a friend with him at any time during the course, as often as he may wish to do so. These established privileges are mentioned publicly that visitors may feel freedom in coming with the pupils; stranger students are invited to visit at any lecture without introduction by the pupils.

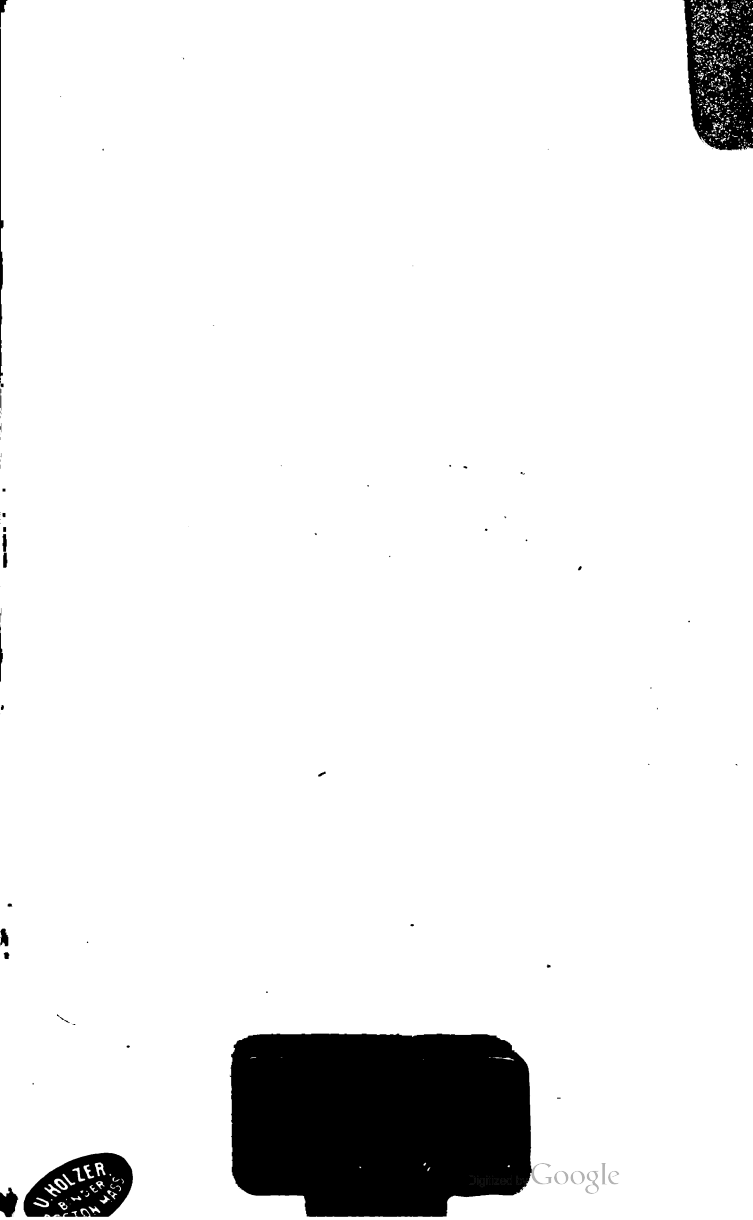
☞ The Ninth street front door leads to the Lecture room, and as it is constantly kept shut (but not designedly fastened) during the cold season, should it be found fastened during the stated times for the room being open for either lecture, or study—which may happen by the accidental dropping of the dead-latch—those wishing to enter are requested to ring the bell without ceremony.

N. E. corner of Chesnut & Ninth street, }  
November 1st, 1833. }









U. HOLZER  
B. W. H. R.  
BOSTON, MASS.

